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TEACH YOURSELF
PSYCHOLOGY

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CHAPTER I

HOW PSYCHOLOGY CAME INTO BEING

WE are going to begin this book not by asking what psychology means, but with a glance at the history of the subject, and this for two reasons:

A. We shall better answer the question "What is Psychology?" when we see and know something of the immense work that has been done by an army of keen thinkers in the field of psychology.

B. It has been thought by a number of people, and is, I believe, still thought, that psychology is a new-fangled subject closely allied with occult teachings, and that no serious thinking person would for one moment waste time in trying to understand it.

We know that this last reason is the basis for the kind of attitude usually adopted by the majority of folk towards any new subject. For instance, when Lister introduced his antiseptic methods into surgery he met with considerable derision even from members of his own profession. What he taught became the accepted practice of all who dealt with wounds, and in modern days has been developed into the aseptic methods now used in surgical operations.

Psychology, however, is by no means a new science thrust upon the public by sensational teachers whose delight it is to arouse the unhealthy curiosity of people. It existed as a branch of philosophy long before the time of Christ, and one of its first students was that ancient Greek thinker, Aristotle. An interest in psychology can be traced in writings before his time, but Aristotle was the first teacher who endeavoured to understand systematically the ways in which men think and believe; and much of what he taught in his day has been of considerable interest ever since.

Aristotle was concerned with the problems of sensa-

tion, that is, how we feel, hear, taste and see, with the problems of imagination, memory, and thinking or reasoning. He knew nothing about the nervous system, a knowledge of which is so essential to modern psychology. He accepted in general the medical view of his time that life is dependent on the presence of air in the blood vessels; air fulfils the functions of the breath as the basis of life, of the nerves as conductors of sensation, and forms that something within us which reasons about the issues of life.

Following Aristotle came a group of thinkers called the Stoic philosophers, who went farther than Aristotle by stating that the ability to reason was to some degree innate in all creatures. In animals, they thought, was an unreflective wisdom which was in the nature of an inherited quality; but only in man was there to be found the ability to think about good and bad.

The Hellenistic age, when Greek and Jew influenced each other in their culture, was marked by an interest in the various religious movements of the time, which tended to create a division between the natural and the supernatural elements in man. St. Paul seems to have been influenced by the teachings of this period when he speaks of the attributes of the body as distinct from those of the spirit. But in the third century A.D. the philosopher Plotinus was engaged on a study of the activities of the soul, which appeared to be independent of the bodily processes, and the method he used was what is now called the Introspective method, that is, looking in upon our own minds to discover how we think and imagine, etc. The great theologian and writer, Augustine, who died A.D. 430, pursued this study, and partly through his teachings this type of introspective thought has had a prominent place in psychology.

What is of special interest in the development of ancient philosophy from the time of Aristotle to that of Augustine is the attempt to separate the bodily

from the mental processes, and to study each as if it existed alone. This was not strictly admissible, because, as we shall see later, there is an interactive influence between the mind and the body; but we understand how psychology, in those earlier stages of its development, after the twelfth century—for little was attempted between the fifth and the twelfth centuries—progressed along two lines: (1) Interest in the structure and functions of the nervous system; (2) interest in the variety of human behaviour, individual and social. As we study the history of psychology we can see (a) that great thinkers and writers were endeavouring to understand how the behaviour and the whole conduct of man were to be explained satisfactorily; and (b) that during the Renaissance period there came into being a new science of man which directed its attention to his natural functions as distinct from the activities of a supernatural soul; and it is here that we can see how science took its leave of religion.

Man, it was then thought, could be explained quite apart from any reference to religion, because his conduct depended on natural impulses arising from within the body itself. He behaved, not because he was influenced either by God or the devil, but because of certain physical elements which were called humours, and which had been mentioned by the ancient philosophers even before the time of Aristotle.

This mechanical way of interpreting human thought and behaviour was sharply contested by an outstanding French thinker, Descartes, who, while recognising the importance of the body in certain forms of behaviour, strongly contended that man's ability to think lies outside the brain, and that it comes to him from God. This meant, of course, that the ability for thinking is innate, and therefore not dependent on physical experiences. Even where feelings are concerned, there are those which are to

be associated with the body, and those which are derived from the soul or mind.

The first thinker to oppose Descartes was John Locke, who, in his "Essay concerning Human Understanding" (1690), sought to show that all our knowledge is the result of our experiences and of reflection, apart from which no ideas can exist, and that our experiences are the unification of our physical sensations through the organs of eye, ear, etc. According to Locke our ideas are the result of abstracting from different experiences certain elements, which are then combined into one whole: for instance, the idea of justice follows upon a number of experiences in which just acts are involved; these common elements are abstracted from the experiences themselves and unified into one whole called an idea. How different was his position from that of Descartes, who believed that our ideas had nothing to do with sensation.

When thinking of the mind in terms of ideas, special mention must be made of the German scholar Herbart (1776-1841). His contribution to psychology has had an important influence on educational theory. He thought of the mind as "cliques of ideas" (apperception masses), all striving for their appropriate place. Ideas are of three kinds—similar, contrary, disparate. Similar ideas are identical at different times: for example, the song of a bird in the morning is one idea, the song of the same bird in the evening is a similar idea. Contrary ideas are not contradictory in the sense of opposite, but rather they are different in kind—the song of a bird is different from the song of a baritone. Disparate ideas are those without similarity; for example, the song of a bird is quite unlike a loaf of bread. Now, these different ideas try to find a way into the mind, and if two happen to be present at the same time they will fuse into one, providing they are similar. For example, a series of musical notes will fuse into a tune. But when they

are dissimilar they produce a unity through the process of complication. In the cinema, for example, we see the moving picture, we hear the sound of voices and other sounds. Through the process of complication we have the idea of a "talkie". If neither fusion nor complication is possible, then the contrary ideas compete. Either I listen to the song of the bird or to that of the baritone, and here the strength of the one or of the other will decide the issue for me, unless I deliberately decide for myself between them. Once the ideas enter the mind they are never lost. If they move to the centre of the mind they are focal and are clearly discerned; if not, they must either find a place outside on the threshold of consciousness (or marginal area), or they pass beyond the threshold into the realm of the unconscious. Herbart anticipated much of what Freud and others proved after his time, and later on we shall see how true this is. Further, in paving the way for a psychological approach to education Herbart did a great deal. You will have noted what I said about his cliques of ideas in the mind. When a new idea comes along it is the more readily accepted if it can find a suitable place among one or more of these cliques (or apperception masses). Let me put it this way: you can better understand a book on psychology if you already know something about the subject—that is, if you already have a clique of ideas in your mind related to psychology. Now, in teaching the purpose is to implant ideas in the mind of the child, and in the light of what Herbart has written it is wise of the teacher to know something of the ideas already in the mind of the child, so that he may present the new idea or ideas in a manner that will be acceptable to some clique of ideas already there. For example, when giving a lesson about the habits of birds, it is well to begin with those birds the children are accustomed to see about them, and with what they may happen to know about them already, and link

the new information on to that particular clique of ideas.

Passing from the Herbartian view that the mind is a mass of ideas all striving for ascendancy, let us consider another interesting development in psychology, called Phrenology. You probably know something about this subject already, because you have, perhaps, seen a chart of the human head, with the different sections labelled by such names as "memory", "speech", etc. The phrenologist claims to be able to tell your various intellectual abilities and your character by feeling the bumps on your head. Now, if his theory—phrenology—and method were correct he would have saved thousands of hours for psychologists in their attempts to estimate the intellectual ability and character of an individual. But alas! the whole claim of phrenology has been very much doubted. It was introduced by Franz Josef Gall (1758–1828), who, as a boy, showed an unusual interest in the correspondence between the size and shape of the heads of his friends and their mental ability and character traits. As a young man his studies in anatomy made it possible for him to develop this interest, and after accumulating much evidence in mental hospitals and other places he produced his famous theory, Phrenology, and lectured on it in Europe with considerable success. In America and Great Britain he aroused a great deal of popular interest, but, as we shall see in Chapter III, further research work on the brain proved that the basis of the theory was completely false. However, if Gall failed in his attempt to make the geography of the head a criterion of mental ability, he did succeed in emphasising the close relationship between the mind and the brain, and in pointing out the possibility of localising specific emotions; and here he deserved more recognition than he obtained.

It was inevitable that study in the psychology of ideas and of mental faculties would some day demand a satisfactory understanding of the whole nervous system, including the brain. If the mind is made up of ideas which reach it *via* the sense organs, what precisely is happening between the object seen, the actual experience of seeing it, and the idea of it? How are we conscious of this or that object? Locke had made a good guess when he argued that all our knowledge is the result of our early experiences, and of reflection, apart from which no ideas can exist; and that our experiences are the unification of our physical sensations through the organs of eye, ear, etc. But it was not until the early part of the nineteenth century that a definite physiological attempt was made to answer the question as to how we receive our sense impressions. Sir Charles Bell, a Scot, discovered, among other things, that there are two types of nerves—sensory and motor. The former convey sense stimuli to the brain, and the latter convey the responses to the appropriate parts of the body. His discovery was invaluable to those who later studied the different functions of the brain. The first in this field of physiology was Pierre Flourens, who experimented on the brains of pigeons. Very different from that of the phrenologists, his work bore the hall-mark of a strict and scientific inquiry, and it proved that the brain worked as a whole when any one part of it was excited, and not in separate sections, as Gall and his disciples believed.

The structure and nature or composition of the brain became a subject of keen scientific interest, and soon it was found that it consisted of two different substances, grey matter and white matter. The grey consisted of nerve cells, and the white was composed of nerve conduction fibres. Marshall Hall, another Scot, found that certain bodily movements could be produced without the help of the brain. He per-

formed his experiments on decapitated animals, and his results showed that some bodily movements are outside the field of conscious or voluntary control.

The increased work done on the nervous system and the discoveries made furthered the interest in the sense organs themselves. Names well known to every serious student of psychology are those of Helmholtz, Hering, Weber and Fechner. The two former contributed theories on seeing (Helmholtz contributed also to that on hearing), whilst the latter two did a great work on touch, that is, on our ability to differentiate between different weights. During their day taste and smell were also studied, and here Weber again made valuable contributions.

The outcome of these physiological experiments and discoveries was to give further drive to the belief that our thinking, feeling, desiring and willing could be explained in terms of the nervous system; but closer investigation has shown (as we shall see in later chapters) that a materialistic conception of the mental processes cannot be substantiated and maintained, though none can deny the indispensable part played by the nervous system as a whole in our mental processes and behaviour. Up to the time of Charles Darwin the interest shown in psychology was centred in how man obtained his knowledge of the world around him, and how as a result of his experiences he reacted to it. But one of the results of Darwin's epoch-making work was to introduce a new factor into the study of psychology—the idea of evolution. All higher forms of life had evolved from lower forms, and points of similarity were to be observed between the behaviour of men and that of animals. It would, of course, be wrong to say that Darwin was the first to conceive the idea of evolution, the idea was very much older than Darwin, but it is true that he was the first to give it definite shape, and this he did after many years of serious investigation.

About the same time Herbert Spencer, who wrote the "Principles of Psychology" (1855), showed a similar interest in the idea of evolution, and among his many contributions to psychology from the biological angle was the belief that acquired characteristics were passed on from parents to their children, and to the offspring of these. This was a radical point of view, and was duly attacked by a critic called Weismann. Nevertheless, this revolutionary aspect of the evolutionary theory was not without some truth, because since the days of Spencer the view that each individual inherits racial characteristics is still held by psychologists, though few now accept the idea that the acquired characteristics of parents are transmitted to their children. What Darwin and Spencer did for psychology was to emphasise the necessity of studying the human mind not only in relationship to its environment, but also to its hereditary background.

Such an emphasis naturally stimulated an interest in animal psychology. Outstanding in that field were Fabre, who studied the behaviour of insects; Romanes, who studied animals and made the serious mistake of reading into animal behaviour much that is human; and Lloyd Morgan, who corrected Romanes' mistaken anecdotal method by introducing the "law of parsimony", which means that animal behaviour should be explained in as simple a way as possible, "providing the explanation accounts for all the facts". For example, suppose a shepherd's dog goes with him to church. According to the anecdotal method of Romanes, the dog goes to church because he is as religious as his master; but, if we apply the "law of parsimony", we would say that the dog goes to church because he wants to be with his master. In addition to the above names, mention should be made of Thorndike in America and Köhler in Germany.

An interesting and much more versatile writer on psychology after Darwin and Spencer was Sir Francis

Galton, who had a real flair for studying the behaviour of both men and animals. His first important work was "Hereditary Genius", in which he gave support to the theory of heredity. According to Galton, genius is inherited, because it runs in families. In a sense this is true, but Galton's statement needs to be accepted cautiously, because it is not easy to account for intellectual ability. Other factors besides heredity must be taken into consideration, particularly that of environment; though in fairness to Galton it must be admitted that this factor was not completely ignored by him. However, his study of the individual's innate endowments eventually led him to the subject of eugenics—the science of improving the human race. But the study of heredity was not the only contribution Galton made to our subject. His study of imagery was even more psychological in character than that of heredity. His purpose here was to discover the kind of imagery different individuals employed in remembering, and one of his interesting findings was that visual imagery was quite common among non-scientific people, and especially among children. This study by no means ended with Galton, for it still occupies many modern research students. Further, Galton showed a keen interest in individual mental ability, and his investigation here marks the beginning of the prodigious work now being done by Educational psychologists, who seek to estimate human intelligence by the method of testing individuals.

Interesting though the physiological and experimental work is, in psychology the bulk of the thoughts on the subject came from the minds of philosophers. Their work was known as Systematic psychology, as distinct from either the Physiological or the Experimental. We can think of Aristotle, Plotinus, Augustine, Descartes, along with a host of others, including Locke and Herbart, as students of this school; but for our purpose we might glance at the principal figures

of the middle of the nineteenth century. J. S. Mill disagreed with those thinkers—his own father among them—who were known as the Associationists. They believed that the mind is made up of ideas which are associated or held together by different bonds and regulated by different laws. To J. S. Mill this was just a piece of mental chemistry, and he strongly contested such a view on the grounds that it could not explain how we believe, that is, how we can form judgments and formulate theories from the ideas themselves. His criticism was indeed valuable as well as valid, even though he did not break away completely from Associationism. Alexander Bain was the first to regard psychology as a separate subject, and not as a branch of philosophy or physiology. In fact he devoted most of his life's work to it, and was also the first to write a text-book of psychology. It appeared in two parts: "The Senses and the Intellect" (1855), and "The Emotions and the Will" (1859). At the time of their appearance they were useful, and even now much of them could be read with approval as well as interest. Bain was firmly of the opinion that before we can truly understand the mind a knowledge of the body is essential. There was, for him, no disputing the relationship of the mind to the body, and he described it as two parallel series. The moment mental processes began, corresponding bodily processes began, and *vice versa*. In fact they were like two trains running together on parallel lines. Like J. S. Mill, he partly accepted Associationism, but gave a much greater place to the factor of striving and to the instincts. This meant that the mind did not function so much as a machine as older Associationists thought, because there was a spontaneous mental activity outside the realm of the ideas.

The German philosopher Lotze also stressed the relationship of the mind to the nervous system; though he pointed out that the mind could never be

reduced to physiological terms. This was a timely correction to the trend of thought in his day, when physiologists were obsessed with the study of the whole nervous system. Lotze was a physiologist, but his interest in philosophy delivered him from a materialistic interpretation of the human mind, and we are indeed indebted to him for his admonishment to the materialists.

Later contributors to Systematic psychology were Sully, whose book "Outlines of Psychology" displaced that of Bain, and was widely read as a textbook by students; and Ward, who wrote a most arresting article in the ninth edition of the "Encyclopædia Britannica", which he later elaborated for the eleventh edition. Just as Lotze had aimed a decisive blow at the materialistic interpretation of the mind, so Ward hit hard against the Associationists, by exposing their failure to account for mental unity and creativeness. A writer whose works have been greatly read and studied was Stout. His "Manual of Psychology" has a place on the bookshelves of every serious student of psychology.

In America the most outstanding Systematic psychologist was William James, who, like many of his predecessors, began his career as a physiologist; later he became a psychologist, and finally ended his career as a philosopher of no mean distinction. Anyone willing to read and study his two volumes on "The Principles of Psychology" will not be bored by the way in which the subject is presented. It would be futile to attempt a summary of James's contribution to psychology in so brief a glance at the history of the subject, though his treatment of the emotions will be mentioned in Chapter VII. Nevertheless it is hoped that the reader of this little volume will turn some day to the above-named valuable work of James.

Before psychology could claim a place among the sciences, some kind of experimental work had to be

done to make it more objective. Galton had already done much in this direction; but it was Wundt, a German of Leipzig, who really got down to the prodigious task of Experimental psychology. In the next chapter we shall refer to Wundt in connection with the Introspectionist School of psychology. But here it can be stated that he believed the mind to be made up of sensations which are associated. He is closely allied to Herbart in his teaching about ideas, and in much of his terminology. For example, he writes about the "fusion" and "complication" of ideas. But he goes farther, and talks about "assimilation", which is the process of one sensation absorbing another. Again, Wundt introduced into psychology a new idea—the "Three-dimensional" theory of feeling. Previously feeling was thought of in terms of pleasure and pain, their duration and intensity. But according to Wundt there are three sets of bi-polar feelings: pleasure and pain (or unpleasure), strain and relaxation, excitement and calm.

In his laboratory at Leipzig many keen students gave themselves up to Experimental psychology, directed by Wundt himself, and using special apparatus designed for the specific purpose of measuring appropriate mental responses to different stimuli. Experiments were performed on seeing, hearing and touch, on how we judge space and time, how long it takes to associate words, and how attention fluctuates and ranges in different individuals. Experiments were also performed on how we learn.

It was only to be expected that Experimental psychology would arouse criticism, but the enthusiasm of the Experimentalists could not be discouraged by their critics, and their work has gone on with increasing zest and determination. Today, in the psychology laboratories of this country and America, students taking this subject in their degree course have to put in a specific number of hours of experimental work.

In fact it is true to say with two Edinburgh psychologists, Drs. Drever and Collins, that "a psychology without the experimental part is today an anachronism".

It was unavoidable that psychology should become departmentalised, because by the middle of the nineteenth century the accumulation of knowledge, both in bulk and range, was great enough to induce investigators to choose a special subject to which to devote themselves. A psychological study of peoples was begun in Germany by Hegel, and Wundt, whom we have just been considering, by Comte in France, and it received considerable impetus from the anthropological writings of Tylor, Sir John Lubbock, and later of R. R. Marett, who studied the origin of human civilisation. But again it was a German scientist, Waitz, who made the first complete study of the life of the savage, which he based on much evidence collected from time to time. Other contributors in this field were Max Müller, whose intensive study of mythology and language was of immense value; and Steinthal, who studied the relation between psychology and the different languages.

A French writer, Durkheim, made an extremely valuable contribution to Social psychology. According to him, a man's thoughts are not the products of his own mental activities only, but also of that social environment of which he is a part. He believed that there is such a thing as a group mind, which is something more than a combination of the individual minds within the group. Durkheim arrived at this idea through his pre-occupation with the psychological aspects of primitive life; but, attractive though his theory is, one feels that it cannot be supported by actual evidence. Much more reliable is the theory which found its roots in Darwinism, and which explained the mind of man as it developed within its social environment. G. Stanley Hall and J. M. Baldwin,

instead of postulating a group mind, sought to show how the mind of the individual develops through the interaction of one mind upon another within the group. Other writers who have made valuable contributions to the study of Social psychology are Wm. McDougall, whose book, "An Introduction to Social Psychology" (1908), made its mark on both British and American students of the subject; and E. L. Thorndike, who studied in the light of Animal psychology the precise and original nature of man, with particular emphasis upon the instinctive tendencies within his nature. In more recent times W. H. R. Rivers ("Psychology and Politics", 1923), W. Trotter ("Instincts of the Herd in Peace and War"), and earlier, Graham Wallas ("Human Nature and Politics"), Bagehot ("Physics and Politics"), are only a few of the many writers on this subject.

Child psychology, like Social and Animal psychology, has its roots in the early findings of psychology as a whole. As a special subject it is not more than a century old; before that it was just "scattered notes of curious behaviour observed in infants". The first distinctive work on the mind of the child appeared in 1786, when Dieterich Tiedemann produced a book which was translated into English from the German in 1877, with the title of "A Record of an Infant's Life". Charles Darwin himself showed much interest in the subject, and for a time kept a daily record of a child's development. Later, James Sully promoted the study by his important work "The Psychology of Infancy", 1895. In America Baldwin, through his inspired book, "Mental Development in the Child and the Race", gave the subject a special drive, just as Tracy's book, "The Psychology of Childhood", had done previously. Mention must be made, too, of the noted psychologist Stanley Hall, who, incidentally, in 1883 opened the first laboratory in America for the study of experimental psychology. Nor must we

overlook the very valuable work of the French school, particularly that of Binet, who was the first successful creator of what are now known as "intelligence tests", designed to measure the intelligence of children, and later developed by others for the purpose of estimating adult intelligence. The measuring of intelligence in adults is now practised in the army by an able group of psychologists trained for this kind of work. Italy also has contributed much to the study of Child psychology through the educational methods of Madame Montessori, and so has Koffka in Germany with his introduction to Child psychology, "The Growth of the Mind".

One of the most absorbing interests in psychology has been centred in the study of the abnormal mind, and I believe it is true to say it has captured the public sympathy more than any other branch of the subject. In fact one would say that its appeal has been so strong that there have sprung up many spurious types of popular psychology which border on charlatanism, and against which every serious student of psychology will protect himself with a solid reading of his subject.

The kind of psychology to which I am referring is Psychopathology, sometimes referred to as "depth psychology", because it seeks to find the varying causes of human behaviour, both normal and abnormal, in the depths of the mind. It is true to say that psychological healing had its beginnings in medicine and not in any serious academic study of psychology. It is very much bound up with the history of hypnotism, which was first introduced through Mesmerism (Mesmer, 1734-1815), and is a form of sleep induced by a doctor in his patient, or by a psychologist in his subject. Mesmer, by the way, believed, quite wrongly, that by passing certain magnetic fluids from himself to his patients he could induce a state of sleep to make suggestion treatment possible, and sometimes even as

a condition for surgical cures. A similar work was carried on by Liébeault at Nancy, 1864, and also by what became known as the Paris School of Hypnotism, headed by Charcot, 1878, and later by Janet. Both of these influenced a Viennese doctor named Freud, who later abandoned hypnotism for the method of free association and dream interpretation. His work and results interested other doctors, and two of distinguished merit were Adler and Jung, who later disagreed with Freud and embarked upon the task of finding different explanations to account for mental illnesses. The emphasis of Freud's theory was on infantile sex repressions; Adler placed it on the ego or self-assertion tendency, and in 1912 he started a rival school, known as the School of Individual Psychology. According to Freud the fundamental cause of a neurosis, that is, a nervous or mental illness, lies in the child's unhappy love relationships with its parents, principally with the parent of the opposite sex. Adler believed that the cause lies in the feelings of inferiority which begin and accumulate in the early years of a child's life. For these feelings the child endeavours to compensate by striving for superiority over others, and the way he adopts to achieve this goal in childhood will be the pattern for his later behaviour; for example, should he find the way of obstinacy the one to gain him superiority, obstinacy will be his means of getting his own way in adult life. If it is in illness, then he will fall ill whenever he fails to meet adult situations.

Jung felt that neither Freud nor Adler gave a sufficiently comprehensive explanation for a nervous or mental illness. He maintained that the fundamental cause of such an illness is to be seen in the failure of the mental energy, or libido, to meet a particular situation. And the way to cure the patient is by releasing the energy pent up within, and directing it to the situation which formerly defeated him. The

method or technique which he used was free association and dream analysis, like that of Freud, but his purpose was different; it was to reveal the patient's unconscious attitude to his present problem, and not to search for any unfulfilled infantile sexual desires. The school which owes its origin to Jung is known as the Analytical, which is not to be confused with Freud's Psychoanalysis. There is much more to be said about these three schools of psychopathology than I have time or space for here, and perhaps by the time the end of this book is reached the reader may wish to pursue the subject himself. A list of suitable books can easily be obtained, and among them he will find works written by other psychologists who neither fully accept all that Freud, Adler, or Jung offers, nor claim to set up any school of their own. In many ways they are eclectic, and their healing work is based on a knowledge obtained from more than one school.

CHAPTER II

DIFFERENT TYPES OF PSYCHOLOGY

ABOUT the beginning of the twentieth century psychology was advancing with such definite steps that it could no longer be regarded as a branch of philosophy, but as a science all on its own. Two outstanding psychologists, Wundt and William James, had already stated the claim of psychology to be a special science. The former, whom I mentioned in the previous chapter, said in 1892 that " psychology has to investigate that which we call internal experience—*i.e.*, our own sensations and feelings, our thought and volition—in contradistinction to the objects of external experience, which form the subject-matter of natural science ". Whilst William James, the great American thinker, wrote, " Psychology is the science of mental life, both of the phenomena and of their conditions. The phenomena are such things as we call feelings, desires, cognitions, reasonings, decisions and the like." According to both Wundt and James, psychology was concerned with the study of consciousness, and the method adopted to discover its nature was introspection, that is, looking in upon one's mind and noting all that is happening when one is thinking, or feeling, or willing. In order to do this advantageously certain conditions are necessary, otherwise much of value to the psychologist may escape the person introspecting.

Introspective Psychology

Introspective psychology began for our purposes with Wundt, whose work gave a very definite lead to others who followed him. The main purpose was to find out what actually happened to the human mind when it reacted to the world outside it. It began with the method of impressionism, which was used to dis-

cover the mental processes when the senses were stimulated by certain corresponding objects. For example, a certain colour was shown to an individual, who then recorded what he felt about it on seeing it; or a certain sound was given, and as far as he could he would then report upon the sensations within his mind. In much the same way all the five senses, sight, hearing, taste, touch and smell, were tested by this method, and some very interesting and valuable results were obtained. It was found that in every sense-experience there was more than one element of sensation present; for example, where taste is concerned there is more than one elementary sensation present. The ordinary layman does not realise that what he calls the taste of a peppermint is really taste and smell. Again, touch is based on four elementary sensations of the skin—pain, pressure, cold, warmth; and since these vary in degree of sensitivity in different individuals, so the experience of touch, even of the same object, varies accordingly.

In order to pursue this method satisfactorily, the conditions under which the experiments were carried out were, of course, strictly scientific. The conditions were those of the scientist in his laboratory, and along with the person who was recording his experience there was a highly-skilled experimenter. The laboratory itself was fitted with the necessary apparatus, much of which was improved as time went on. Nothing, as far as was humanly possible, was left to chance, because these men were as objectively concerned with their scientific field as were the biologists and physicists with theirs.

As already pointed out, the Impressionist method was the true foundation of the Introspective method. It dealt with the simple sensory experiences, but the latter dealt with the more complicated or complex experiences, as, for instance, when one sees a bird and hears it singing, or when one holds two weights, the heavier in one hand and the lighter in the other; or,

again, when one sees the shape and colour of an ornament at the same time. Whatever experience one may have, it can be subjected to the method of introspection, and the skilled Introspectionist is able to tell what he thinks is happening within himself when it occurs. Some say that introspection is not humanly possible with most of our experiences, because the mind is too busily occupied with the experience itself for it to be able to observe what is taking place psychologically at the same time, and according to these dissenters what we are really doing is *retrospecting* after the experience is over. What, however, the Introspective psychologist desired to prove was that something was happening in the mind of man when he reacted to the outside world, and that this something could be scientifically studied, understood, and interpreted.

Nevertheless there are certain difficulties in the way of a complete explanation of mental phenomena by the method of introspection. In the first place, it is difficult to introspect when we have the overwhelming experiences of joy or sorrow, fear or laughter; further, it is not possible to arouse these emotions when we are in the mood for introspection, and when they are naturally and spontaneously moved they are so vital that we cannot bring ourselves to view them through introspection. In the second place, we must recognise the difficulty of completely understanding the introspective findings of another, because his words may not have precisely the same meaning as we give them; for instance, if you were told by a friend that he experienced rapturous delight as he saw the sun setting over the western mountains of Wales, you could not tell exactly what he meant, or what precisely was the nature of his experience. Finally, the introspective method is confined to the level of consciousness, and fails to take into consideration the important workings of the unconscious mind, which, as we shall

see later, cannot be ignored if we are to understand correctly how the mind functions. Nevertheless, even though the method of introspection is not 100 per cent. fool-proof, it has value for the study of psychology in so far as it offers a broad description of our experiences, which can then be classified according to their type.

The Behaviourist School

As a protest to the School of Introspection another was set up by an American called Watson, who maintained that it is only by studying the behaviour of men and women, children or animals that we can bring psychology into the realm of science. It cannot, however, be said that Watson was the first to note the importance of studying behaviour as a means of understanding mental processes. Long before him psychologists like McDougall and Cattell had mentioned the necessity for studying behaviour, though they also recognised the place of introspection in the development of psychological science. Another American, too, named Thorndike, had made an invaluable contribution to psychology through his dauntless work in experimenting on animal behaviour to estimate the animal's instinctive capacity for learning. From his experiments on chicks, cats, and monkeys he arrived at the opinion that animals learn from trial and error, that is, they learn after a number of attempts to solve a problem by eliminating all unsuccessful movements and strengthening their successful ones. How they did this he could not tell, as the method of introspection could not be employed in their case; but of this much he was certain: that the learning mechanism was based on two laws: (1) the law of exercise; and (2) the law of effect. The more one learnt, the more one succeeded, and the more one succeeded, the greater the satisfaction; and of course the converse was also

true. In studying Educational psychology Thorndike employed the same method of observing the behaviour of children as he had used with animals, and he moved steadily towards the belief that psychology must concentrate on studying behaviour before it can understand human nature.

Watson took up this view-point and argued strenuously for Behaviourism, contending that introspection should be completely abandoned in favour of the objective method employed by animal psychologists. It would be unfair to suggest that Watson merely took over the findings of Thorndike and other animal psychologists and based his arguments upon their work. He performed similar experiments himself, which helped to strengthen his belief in the validity of Behaviourism. Briefly, his position was this: all human and animal behaviour is the result of conditioned reflexes, and all thought and feeling are conditioned by previous experiences which are registered in the nervous system. The conditioned reflex simply means that there is a particular bodily response to a particular stimulus; for example, a hungry dog secretes saliva on seeing a dish of food; this is a natural response; but supposing you rang a bell before presenting the dish of food, after some repetition the dog's saliva would immediately flow on hearing the bell, even before seeing the food itself. That is, the reflex flow of the saliva is conditioned by the stimulus bell. But Watson, whilst indebted to Thorndike for the results obtained by the latter in animal psychology, was also indebted to the Russian physiologist Pavlov, who experimented on dogs and showed how the conditioned reflexes could be built up within the nervous system.

According to Watson the whole of our behaviour is the result of these conditioned reflexes, even our thinking and feeling are based on them. Thinking is due to silent speech, or to a series of speech movements

too small for the ordinary person to be aware of them. Something outside ourselves stimulates the movement, which then links up with others along the various paths of association. In a sense our thoughts are produced by external stimuli setting in motion the various speech movements, in much the same way as a telephone bell rings because a certain number is dialled on some other automatic telephone.

Just as there were difficulties to consider in the Introspective psychology, so there are difficulties in the Behaviourist School. Let us take the belief that all thinking is nothing more than the rapid unobserved movements of silent speech. Now, if this were true, how is it possible to think, as we often do, of something other than that about which we are speaking? I can use my speech movements when reciting a poem, and at the same time think of catching an early train to get home before nightfall. Again, when speaking I may find my mind busily searching for the correct word to use. Surely, if thinking is nothing more than silent speech, this could not be possible. Besides, thinking may be concerned with the relationship of different things, say the relationship between A and B. My speech movements, because of previous experiences, may be associated with A and B separately, but not with the relationship of the one to the other, and to think that out I must be able to do so without speech movements. Silent speech may express thinking, as it sometimes does when we see the lips of a person moving as he appears to be silently talking to himself, but his thinking generally precedes even this kind of expression.

Further, if man is nothing more than a machine who reacts to the world around him as a typewriter responds to the touch of the typist, how can we explain the visions of prophets and the dreams of seers whose thoughts are unique and in advance of their generation? How, then, is it possible for Watson and his

disciples to contest the theory of introspection with such determination and enthusiasm, if the human mind can only behave in some such mechanistic way as that for which they argue? They themselves would not be free to criticise, if their point of view were correct. These facts in themselves prove that there is some factor which we call mind, and which is capable of reflecting upon the physical experiences of sensation.

Finally, the Behaviourists are seriously guilty of overlooking the fact that much of our behaviour is reflective, and not automatic, as their conditioned reflex theory maintains. Reflective behaviour means that I have thought out some goal which I desire to reach, and to do so the whole of my body must operate, that is, all my bodily movements must be co-ordinated. Now, what is it, in the first place, that thinks out the goal? And in the second, what is it that co-ordinates my bodily movements? Reflex behaviour is spontaneous and automatic, responding to some given stimulus; for example, the blinking of an eyelid when a strong light is focused on the eye. This is beyond the control of the individual and is not previously thought of; but when I write a letter my action is preceded by the thought of writing it, and then by thinking about what I shall write.

There is much that can be learnt from the Behaviourists, but we cannot accept their word as final, because there is a great deal of material which lies outside their field. Man is not merely a machine, and to be explained in mechanistic terms; he is more, he thinks and feels, he wills and desires, and we need a more comprehensive psychology to account for even some forms of his behaviour.

Hormic Psychology

The Purposive or Hormic School of psychology maintains, despite the bold pronouncements of the

Behaviourists, that there are purposive factors which transcend the physical realm. This school takes its name from the Greek word *horme*, which means an urge to action, and one which comes from within the individual and not from outside. None who think clearly can deny that there is such a thing as human purpose, and, as already pointed out, even those psychologists who by their mechanistic theories try to do so, are actually purposeful in their endeavour to prove their belief and win psychology for the Behaviourists. We have no wish to cross swords with them when they say that neither the animal nor the individual who submits to psychological experiment is purposeful, but we must add that they who perform the experiments are necessarily so, otherwise they would not go to the trouble of trying to obtain results from their laboratory work.

When the word "purpose" is used it means that a certain end or goal has been seen, and that there is a desire on the part of some one to achieve or reach that goal; for example, the hungry man who is purposeful sees how he can satisfy his appetite for a few shillings at a British Restaurant; but he not only sees this, he also desires to reach it and relieve the pangs of hunger.

The chief exponent of the Hormic psychology was William McDougall, a noted teacher in both this country and America. His first and most valuable contribution to this type of psychology was his book, "An Introduction to Social Psychology". Here he endeavoured to show how society and its different organisations might be better understood if a study were made of the individual and his psychology, particularly of human motivation. He agrees with the Behaviourists in their objection to the method of introspection as the only true way to understand the human mind, but for a rather different reason. The Behaviourist argues that introspection can never be truly scientific, since we can never be sure of what a

man actually thinks, but we can form some estimate of his actions through observation. McDougall, on the other hand, declared that there is a field of psychology which lies outside the scope of the Introspectionist, and in it are to be found the causes of human motivation. The problem that needs to be solved is not what happens when a man behaves in a way different from that of his neighbours, but why he desires to behave differently. What precisely motivates his choice of certain ends? And the answer can only be supplied by first assuming the presence of primary desires, needs, or impulses which spring from the instinctive life of the individual. In the book mentioned above, special emphasis is given to the different instincts, which McDougall regards as the primary motive forces within the individual. I am hungry for my lunch at one o'clock, not because I have been fed by others from my infancy up to the present, which would be the contention of the Behaviourists, but because of a hunger instinct which was present at the moment of my birth, and now asserts itself at that particular hour. More will be said of the instincts when we come to Chapter IV. But at this juncture it might be pointed out that whilst the instincts are regarded by McDougall and his followers as the primary motivating force of all our behaviour, they are capable of being modified by learning. For example, the child is naturally afraid of a loud noise, but not of the darkness; if, however, he hears a loud noise in the darkness he will later instinctively react with fear to the darkness. This, as you will readily see, is closely allied to Pavlov's conditioned reflex theory. Again, the instincts contribute, on the human level, to the formation of what are called sentiments, that is, ideas around which constellate the instinctive emotions, as in the case of patriotism, so that they too function as motivating forces. Hence our behaviour is often not the purely rational thing we sometimes

think it is; it often springs from our instincts, and is motivated by our sentiments. Though there are some psychologists who would go farther, and say that there is an instinct of rationality, because man delights in his thinking for its own sake.

As a result of the efforts of those who accepted the Hormic psychology, it became increasingly evident that society was wrong in its attitude to the individual. The individual is not merely the result of impressions made upon him by his social environment, but the possessor of primary forces—instincts—which sometimes cause him to rebel against society.

But the Hormic type of psychology, like the others we have considered, has not escaped criticism. Some critics have said that the idea of instinct was just a fanciful product of highly speculative and imaginative minds; others, whilst recognising the presence of slight tendencies causing the individual to behave in certain ways, considered that these were subdued in early childhood by environmental influence; and others, too, doubted the existence of such innate forces as instincts because no two psychologists could agree on their precise nature and number.

A further criticism of the Hormic School is that it is partly guilty of the fallacy committed by the Faculty psychologists, who divided up the mind into different areas, and then allotted to each a particular faculty, such as feeling, judging, etc. According to them the reason why a man thinks is due to the faculty for thinking; whereas in point of fact they can only believe in his ability to think because *he is a thinking being*, and not because of any presumed faculty for thinking. Similarly, the Hormic psychologists say that a man behaves in a particular way because a particular instinct is active; that is, they postulate the existence of instincts on the grounds that man behaves differently in different situations, and then proceed to say that he behaves differently because of the different

instincts. This is similar to saying that God exists because the Bible says so, and the Bible is true because it is the word of God. Besides, the Hormic psychologists cannot say what the precise nature and structure of the instinct is, any more than the Faculty psychologists can say it of the various faculties. We can speak precisely of the motor-car engine, and for this reason are able to tell what it is capable of doing. Neither the Faculty nor the Hormic psychologists can speak with precision and accuracy; the most they can say is that man behaves "as if" he were motivated by innate springs of action.

Nevertheless, the findings of Purposive psychology have met with more favour among scholars of psychology than those of any other school.

The Gestalt School of Psychology

One of the youngest schools of psychology was started by a small group of men in Germany about the time when Behaviourism was making itself felt in America. The name "Gestalt" means a "form" or "pattern"; these words do not accurately translate the German idea, we have unfortunately no precisely equivalent term in our language; many psychologists use the word "Configuration", and sometimes speak of the "Configuration Psychology". Like the Behaviourist School, it was a revolt, but against the doctrine of association rather than against introspection, though even here there has been much criticism by the Gestalt disciples. It rejects the view held by many since the time of Locke and Hume, that the whole of anything is conceived really as a sum of its parts, and that human experience is built upon a series of sensations which are capable of being associated with others in a manner that produces complex experience and ideas. The Gestalt School insisted on studying psychological experience as a "whole", and

if the parts must be studied, it can be done correctly only by seeing them in their relationship to the whole and not to one another. Now, this sounds rather complicated and difficult, but it will become clearer, I hope, as we go along. The Introspectionists were concerned with what an individual experienced when he received a stimulus of some kind or other; for example, seeing a certain colour or hearing some sound. That is, they concentrated on what are called sensory reactions. The Behaviourists, thoroughly disapproving of the introspective method, turned their gaze on the behaviour of living things when they are stimulated, and their prime interest lay in motor responses and in conditioned reflexes as propounded by Pavlov. The Gestalt School contended that there was nothing gained in breaking up human experiences into sensory or motor elements, that the Introspectionists and the Behaviourists were achieving little of psychological value. To appreciate mental experiences we have to see that from the moment a man or an animal sees a situation before him, to that moment when he responds to it, there is something of a "wholeness" about his experience, and this something is in the nature of a dynamic mental organisation which is more than a fusing of sensory experiences and converting them into motor responses. In a sense the man (or animal), the situation, and his response to it, all form a complete picture. Let us take a portrait: as we gaze at it we are impressed by it as a whole, even though something in the face may strike us as interesting or unique. If we were to cut up the portrait, even though we were careful not to destroy any of the features, such as the eyes or nose, the parts would mean no more to us than the separate pieces of a jig-saw puzzle. They have meaning only when they are set together in their proper places and present a whole picture.

Similarly, you cannot tell what a man's personality is like merely by studying each individual trait; to do

so satisfactorily you must concern yourself with it as an organised whole. Or again, you cannot appreciate a tune simply by studying the different notes of which it is composed. The tune presents a definite pattern—either good or bad—of those notes, and with the same notes you can produce many simple or elaborate tunes, but the notes in themselves convey little to you. In the same way, our sensory and motor experiences would mean nothing to us unless they were organised into some pattern by the mind.

The psychologists who inaugurated and led the Gestalt School were Wertheimer, Köhler, and Koffka. Their research work was done chiefly in the field of perception, and here Wertheimer experimented with a stroboscope, the forerunner of the modern cinematograph, invented by a Belgian physiologist named Plateau. Wertheimer used two pictures differently marked, and by speeding up the instrument he was able to see what speed was necessary for the space between the pictures to disappear. The results of his work led him to believe that there is some dynamic agent that organises the sensory experiences into a complete whole or picture, provided that the gap between the experiences is not too great. For example, when we see a picture at the cinema we do not look at a large number of photographs giving different people and their varying positions; we know this to be so, of course, because of what we have read or heard, or even seen ourselves through handling the film of a child's cinematograph. But at the cinema we are watching a picture that moves and lives before our eyes, and at the time of watching we are unaware of what is being done to produce the effect we are experiencing.

This study of Wertheimer in the field of perception was followed up by the very interesting and valuable work of Köhler, who experimented with apes in Teneriffe, in the Canary Islands, before and during the

last war, when he was marooned by war conditions, and was able to give considerable and uninterrupted attention to his researches and inquiries. His chief purpose was to discover whether animals had a higher intelligence than was generally believed, and whether it was possible for them to learn from ideas as well as from trial and error. He was not satisfied that Thorndike, who has been mentioned in connection with the Behaviourist School, was altogether right when he said that animals learn exclusively by the method of trial and error, and that when learning to solve a puzzle they proceed along the track of random movements which display a complete absence of insight. As against this point of view Köhler maintained that exceptional animals, like human beings, saw a distinct pattern in the experiments they were enticed to perform, and thereupon proceeded to solve the problems set before them. For example, if the ape were put into his cage and a banana placed outside the cage beyond the reach of his hand, also a stick near by, he would proceed to use the stick for the purpose of bringing the fruit nearer so that he might grasp it. This suggests that the whole situation was grasped by the animal, and that his insight enabled him to overcome his difficulty. But if the stick were placed at the back of his cage, then he would have two pictures in his mind—the one of himself and the banana beyond his reach outside the cage, and the other of himself and the stick inside. Between the pictures there was a mental gap, and on reducing it he again had one picture, and proceeded to use the stick as before. Again, if a banana were tied to the top of his cage beyond his reach, and two boxes were placed within sight, he would place the boxes one on top of the other in order to gain the end in view. The ape, however, showed no constructive ability; he placed the boxes haphazardly, with the result that they sometimes toppled over when he began to climb them.

What did emerge from Köhler's experiments was this: animals learn from insight and not from trial and error. Their behaviour demonstrated the point of view held by the Gestalt School, that all sensory experiences and motor responses are organised into some form or pattern by a dynamic co-ordinating process going on within the brain.

A similar point of view is expressed by Koffka in his book, "The Growth of the Mind". These three great exponents of the Gestalt theory gave a powerful impetus to the establishment of this comparatively new school of psychology. It would now seem that we have three methods of learning: (a) the trial-and-error method of Thorndike, with a special emphasis on the laws of exercise and effect; (b) the method of conditioned reflexes championed by Pavlov and Watson; and (c) the method of insight made clear by the Gestalt School. At first they appear to be exclusive and irreconcilable; but a prolonged and careful study of all three methods will show that they are more reconcilable than was at first thought, and that all these contributions to the subject of learning may some day help in securing a more comprehensive theory.

It would indeed be a mistake to think that we could divide all psychologists into one or other of the schools of thought which we have been considering in this chapter. There are a great number among the many eminent psychologists in different countries who prefer to remain outside and view in a detached way the work of the Introspectionists, of the Behaviourists, of the disciples of McDougall and his Purposive psychology, and of the Gestalt School. They welcome every contribution which the more dogmatic psychologists can offer, and are indeed grateful to them for the work they have already done, but they do not as yet feel that the way is so clear that they can accept the hospitality and teachings of any one school. Let me quote what an American psychologist, R. S. Wood-

worth, says in one of his books ("Contemporary Schools of Psychology"): "If the existentialist (who belongs to the school of introspection) presents a good analysis of heat sensation or of colour experience we accept it with thanks. If the behaviourist shows by experiments on little children how conditioned fears may arise, we are free to use that finding in our own psychology. If the Gestalt psychology should show that all learning depends on insight, we should revise our conceptions of learning accordingly. If the purposivist convinces us that the individual is never passive when a stimulus reaches him, that is another important point to be dealt with. . . . Every genuine positive result is meat for the psychologist who is not prejudiced by loyalty to a particular brand of psychology."

As far as we possibly can we do need to keep an open mind about any particular theory of psychology, because the science is a comparatively new one, and there is much country to explore. Therefore we do want to approach our task unbiased and unfettered by the kind of dogmatism that ties us down to any one school. Let us fraternise in our reading and studies with the champions of their respective psychologies, let us ponder over, weigh and analyse in our minds all the results of their untiring researches, because the more knowledge we have of our subject, and the greater appreciation of what others think and teach, the more vital and valuable will psychology itself be to us personally.

CHAPTER III

HUMAN PSYCHOLOGY: MIND AND BRAIN

THE purpose of this book is to study the psychology of human beings, not that of animals. Human psychology is bound to produce a greater field for the study of mental activities than animal psychology, because in the latter we are confined to the sphere of behaviour, whilst in the former we have the opportunity for studying not only what men and women do in given circumstances, but also what their subjective experiences are in response to certain stimuli. As already pointed out, the Behaviourist School of Watson will have nothing to do with individual subjective experiences as reliable data for psychological investigation; they restrict their inquiries to human behaviour and try to estimate its value in terms of conditioned reflexes. Apart from the fact that the human may behave more intelligently and rationally than animals, there is a much wider scope for our studies in human than in animal psychology. The Behaviourist makes no claim to differentiate between compulsive and rational acts; for him they are all acts conditioned by what has gone before; the fact that choice may play a part in the one but not in the other is of no great importance. But for those who are not prepared to accept the narrower field of the Behaviourist, cognisance must be taken of the *kind* of behaviour of human beings—whether their acts are compulsive or desired; and indeed this is important where crime is concerned, or where moral responsibility and moral disease are to be considered. The habitual drunkard is what we may rightly call morally responsible for his behaviour in so far as he chooses to do what he does; the alcoholic on the other hand is morally diseased, because he is the victim of inner compulsions that

drive him to actions which he thoroughly abhors. Again, in human psychology we pay due regard to the peculiar traits of character, idiosyncracies of thought, and variations of response to similar situations. One child frequently behaves differently from another in the same environment, even though there is nothing apparently to account for this in their heredity. Human psychology seeks to explain such individual differences, the differences of temperament, attitudes, likes and dislikes, and of various forms of behaviour; for example, why one man is repeatedly ill when no physical explanation is adequate to account for his condition, why another in similar situations is aggressive, or submissive, or obstinate. So the field of human psychology is immense, and we need to know something of the whole man before we can understand why he is an individual, and very different from his neighbour in certain respects.

In our study of psychology we feel obliged to ask whether the mind and the brain are the same, or whether they are different from each other. You will perhaps remember that the Behaviourists disputed the grounds of the Introspectionists because the latter claimed to study the mind, for which there is no tangible evidence. They did not definitely declare that there was no such thing as a mind, but that if it existed nothing could be known about it. Therefore we should concentrate upon behaviour, and to do this it was only necessary to study the sensori-motor system, because behaviour was the result of stimulus-response units combining as it were to form a whole. It is, of course, true that when we speak of the mind we are thinking of something that cannot be handled or analysed; but the brain is otherwise; we can speak of its actual position, its structure, and also of its function, because already a fair amount is now known of the different parts which control our behaviour.

Let us consider, in the first place, its position. The

brain, as you know, is situated in the head, underneath the skull which protects it. It is separated from the skull, which is really its outer casing, by three membranes known as *meninges*: the *dura mater*, the *arachnoid mater*, and the *pia mater*. The *dura mater*, which comes first between the skull and the brain, is a tough, fibrous layer lining the cranial cavity. It dips down between the main divisions of the brain, between the two hemispheres of the cerebrum, between the cerebrum and the cerebellum, etc., and in this way protects the delicate substance of the brain. The *arachnoid mater*, which is in appearance much like a spider's web, is a thin, delicate membrane which loosely covers the brain, and along with the *dura mater* it dips between the main parts of the brain. Between this membrane and the *pia mater* there is to be found a clear, watery fluid which is called the cerebro-spinal fluid and serves to protect the brain and spinal cord. In a sense this fluid acts as a water-bed for the brain and helps to absorb shock when the skull is knocked. The *pia mater* itself is also a delicate membrane which carries a blood supply to the brain through its abundance of blood vessels which reach down into all the different fissures of the brain.

Now let me give you a brief summary of the structure of the brain itself, though I would not vouch for its precise accuracy, because for that I should be obliged to give more information than is necessary for us at this stage. The brain is made up of grey and white matter, formed partly in layers, and partly in masses called *nuclei*. The grey matter is mainly made up of nerve cells, and is supplied with blood by blood vessels. The white matter is made up of nerve fibres which are attached to the cells in the grey matter, and provide means of communication between various groups of nerve cells. They are isolated from one another by a sheath of fatty material which in the mass has a white appearance. These nerves are grouped

into bundles, and leaving the brain they pass down into the spinal cord, and correspondingly near cells whose nerves travel into the body.

The brain, for the purpose of study, can be divided up into five parts :

1. The *cerebrum* or fore-brain, which constitutes by far the greatest bulk of the whole brain, and completely occupies the vault of the upper part of the head. It has two hemispheres, a right and a left, and is divided up into what look like six small islands, called lobes, by furrows or *gyri*, to use the scientific term.

2. The *basal ganglion*, or *twixt-brain* as it is sometimes called, is to be found embedded in the base of the cerebrum, and is composed of large masses of grey matter. In animals this is the principal part of the brain, but in man it is superseded by the cerebrum.

3. The mid-brain connects the cerebrum with the cerebellum ; it is about three-quarters of an inch long, and is shaped like a stalk.

4. The *cerebellum* or hind-brain is a mass of nerve fibres and lies towards the back of and underneath the cerebrum.

5. The *medulla* or bulb, sometimes spoken of as the after-brain. It consists of a whitish matter on the surface and a grey matter underneath, and occupies the lowest part of the brain. In structure this part of the brain resembles that of the spinal cord, and it connects the upper part of the brain with the cord.

Briefly, then, the brain consists of five parts, and is made up of grey and white matter, of nerve cells and nerve fibres, and it is, indeed, one of the most complex and intricate instruments, which has evolved from a comparatively simple structure as found in the lowest vertebrates.

Let us now consider its function. As a result of much hard work in the subject, we are able to see what

parts of the brain are important to the psychologist in his study of human thinking and behaviour. For a time the work was confined to speculation, and one who should be mentioned is Franz Josef Gall,¹ and his work during the first quarter of the nineteenth century. This German medical student laboured in Vienna to prove his contention that insane people were suffering because of some brain abnormality, but his proof is now contested by brain specialists. After a time he propounded the once-famous theory known as Phrenology (not Faculty psychology). This theory maintained that different faculties were housed in different parts of the brain, and the strength of each faculty could be judged by feeling the contours or bumps of the skull. Further inquiry and investigation proved that Gall's idea was wrong; it was discovered that the bump has no relation to the structure of the brain underneath, and that definite traits of intellect and character cannot be traced to any one part of the brain, as Gall had supposed.

The work of scientific investigation was for a time confined to the observation of mammalian and human brains accidentally damaged, and also of diseased brains in which haemorrhages and tumours were present. During and after the last war many opportunities were given for a closer study of the brain functions, because many soldiers suffered from brain injury due to shrapnel and bullets, and many miracles of brain surgery were performed. Of course, much is yet to be done before an exact knowledge of brain function can be obtained, but up to the present many points of localisation controlling the different senses, also sensory and motor actions, have been established.

The cerebrum: When you see a photograph or drawing of the cerebrum with its different points of localisation, it is generally the left hemisphere which is shown, probably because it is the left side which controls the movements on the right side of the body,

¹ See Ch. I, p. 12.

including speech both written and spoken (or motor), seeing, taste, smell, and also the memory of our sensory experiences. The nerves from the left hemisphere to the right side of the body, and from the right hemisphere to the left side, cross at a certain point in the medulla. This crossing is called *decussation*.

To return to the functions of the cerebrum and their localisation, it is helpful for descriptive purposes to remember that this part of the brain has been divided off into four lobes: the *frontal* lobe, the *parietal*, the *temporal*, and the *occipital*. The frontal is marked off from the parietal lobe by the fissure called *Rolando*; the temporal lobe, at the bottom of the cerebrum, is divided from the frontal and the parietal by the fissure of *Sylvius*; and the occipital lobe lies towards the back of the temporal lobe. Within these four different lobes there are to be found four specific centres—the motor, the sensory, the special sense centres, and those of the higher mental powers.

The motor centres are located in the frontal lobe; that is, in front of the fissure of Rolando. The centre for the movement of the toes is on the top of the lobe; as they go downwards in the lobe the centres are correspondingly related to the movements of the limbs as we travel up the body, until at the bottom of the lobe we find the centre which controls the larynx.

The *sensori* centres, which receive the messages from the body, are found in the parietal lobe; that is, behind the fissure of Rolando, in positions corresponding more or less with those of the motor centres. Here, too, the sensations of touch, pressure, and movements are located. The special centres of taste and smell, hearing (auditory speech), are located in the temporal lobe, in this particular order, and the visual centres in the occipital lobe. The higher mental powers, such as intelligence and the reasoning powers, are believed to occupy the higher areas of the cerebrum.

Complete memory is dependent on the brain as a

whole, though certain features of it are to be localised in specific areas. For example, the visual memory, which enables us to remember a face or a colour or any object we have actually seen, is stored around the area for sight, that of the auditory memory around the hearing centre, and so on. There are certain memories, however, which were called by the philosopher Bergson "true memories", and these have to do with general experiences, such as that of spending the evening with a friend, or reading a book, or success or failure at school, all of which can be recalled at will. These are not localised in any one part of the brain, yet they are registered within the brain, because an injury to the brain as a whole destroys all recollection of them. We may take it, then, that those specific memories associated with any one sense, such as seeing, hearing, taste, smell, touch, and movements of the limbs (*kinæsthetic* memories), are localised in one or other area of the brain; but that the "true" memories are seated in the whole of the brain.

The cerebellum controls balance, poise, and muscular co-ordination. It has been found that when the cerebellum of a pigeon is removed the bird fails to maintain its balance or co-ordinate its muscular movements.

What is of particular importance to the psychologist in man's anatomy is the seat of the emotions, which is claimed to be in the lower parts of the brain, or old brain, or, if you like, the *medulla oblongata*. It has not been possible to perform on this part of the brain experiments similar to those carried out on the upper part, because it would be too dangerous. But it has been found, for example, that when the cerebrum has been temporarily put out of action, as in the early stages of anæsthetisation, the patient is likely to lose control over his emotions, and he may sing or rage, weep or laugh. This suggests that the control of the emotions is in the cerebrum. And there is a further

fact, that when the medulla is impaired by a tumour, for instance, the emotions seem to disappear, and for as long as the person lives he shows a peculiar indifference to, or a detachment from, situations to which people normally react with laughter or tears, with anger or fear.

Some interesting experiments have been performed on animals which confirm the now accepted theory that the seat of the emotions is in the lower brain. Von Bechtereiv, a Russian neurologist, succeeded in keeping alive dogs and cats which had the cerebrum (cortex) removed. Their emotional behaviour was undiminished; the dogs growled when annoyed and wagged their tails when pleased. The cats reacted with spitting or purring whenever they were attacked by an enemy or stroked by a friendly hand. When, however, the medulla was removed, the absence of emotional reactions was most noticeable.

Goltz also contributed to this theory by reporting his observations on a dog which was deprived of the upper brain. The loss meant that the dog could no longer learn any habit, but its emotions were easily aroused. Further, they were uncontrolled; for example, it "went into fits of rage when a fly walked across its nose". Similar reactions were recorded and reported. So the emotions are not only seated in the medulla, but are controlled by the cerebrum.

Having now considered briefly the structure of the brain, and those of its functions which are of interest to the student of psychology, let us proceed to answer some questions which are often asked. The first is this: Is the size of a person's head any indication of his intelligence? Not necessarily so, by any means. It is true that, as the cerebrum has developed from the mere bulb of the lower vertebrates to its present size in the brain of man, the powers of perception, reasoning, and emotional control have also increased. But as we compare the size of one person's head with

that of another, we see no reason for believing that size has anything to do with intelligence; for example, a woman's head is often smaller than that of her husband, but she may be the more intelligent. The weight of the average male brain is $49\frac{1}{2}$ ounces, that of the female $44\frac{1}{2}$ ounces; though in some exceptional cases the weight has been found to be about 60 ounces. But the weight of the brain is not necessarily in proportion to the amount of intelligence, though it is known that the average weight in the more highly developed races is greater than that in the lower races.

The second question frequently asked is this: If there is such a thing as a mind, how does it work with the body? Of the theories which seek to explain the relation of the mind to the body, or body to mind, one is called Epiphenomenalism, and owes its name to T. H. Huxley. It explains mental activity on the basis of brain activity. What we call consciousness is nothing more than the shadow of what is happening in the brain, in much the same way as we can see the shadow of a moving vehicle. Just as the shadow cannot in any way influence the vehicle itself, neither can the mind (the shadow) influence the body, because it is really non-existent as a force in itself. Basically this theory is materialistic, and it is in a sense a compromise between those who say that there is no such thing as a mind, because mental activity can be explained in terms of brain processes, and those who say that there is a mind because there are mental activities which cannot be explained in terms of the brain. One of the strongest arguments that can be used against this theory is its claim that matter can produce a non-material result, or that material processes can "generate consciousness out of nothing". Another equally forceful argument is that one can produce mental changes without using the means of the body. For example, a person reflecting on some past incident can experience sadness or joy or some

other emotion. This change in his mental state has not been brought about by his bodily activity. Again, think of the phenomenon of alternating personality, like that of Dr. Jekyll and Mr. Hyde. These personalities alternate without any bodily activity to account for them; and when they are successfully integrated into one, it is through psychological and not physical means. A similar fact must be observed with regard to many forms of insanity. If epiphenomenalism were a true explanation of the body-mind relationship, we would expect to find a diseased brain in every case of a disordered mind. This, however, is very far from being the case.¹ Therefore I think we can set aside this theory as unsatisfactory, and proceed to consider the next, which has found favour with some thinkers.

This theory is known as Psycho-physical Parallelism, and it maintains that psychical processes and physical processes run parallel with one another. Each of these is a closed series without any connecting link, but if the one begins, the other automatically runs parallel with it. Now, it is difficult to accept this point of view, because we know that every movement has a cause. For example, when a billiard ball moves along the billiard table, its movement is due to being thrown by the hand, or pushed by the cue, or knocked by some other ball. When I am conscious of a physical sensation, it is due to some link that must exist between my mind and brain processes. That I am conscious of a painful or a pleasant sensation there is no denying, surely; but I cannot speak of the consciousness of a plate of steel when it is touched by fire, for instance. The only explanation, then, is that there is a mind in me but not in the steel, and that for me to experience or become conscious of a physical sensation simply

¹ True, there are cases of insanity, for example, general paralysis of the insane, which are caused by bodily diseases; but these organic mental disorders are in the minority.

means that there is some manner of coupling up my body with my mind.

The third theory is perhaps the most acceptable, because it does not seek to eliminate the mind from the real factors in human life (materialism), but regards it as real just as much as the body is real; neither does it claim for the mind an existence which physical things have not (idealism), nor suggest that there is an unknown reality of which psychical and physical happenings are merely opposite or different appearances (neutral monism). This theory of the relation between body and mind, known as Psychophysical Interaction, accepts the view that body and mind are different, even though we must regard man as a whole. The activity of the body is mechanistic, that of the mind purposive, and both these entities interact on each other and exert "reciprocal influence". For example, the unhappy man is easily put off his food, the state of his mind influences his physical appetite; the boy who is curious to know whether there is a nest in the tree outside his house uses his limbs to climb the tree; that is, his mind induces a state of physical activity. Again, the physically tired man is often mentally tired, and if perchance you should take a drug like morphine, your mental activity will be decidedly affected. For a time you will experience a pleasantly dreamy state, but when the effects of the drug have weakened you are likely to be so mentally restless and anxious that it will be impossible for you to concentrate on anything you are doing. These examples only serve to prove that the body has a definite influence on the mind, and doubtless we shall be better served by this theory as we continue our study of psychology. From time to time we shall see how the mind's activities are definitely influenced by bodily states, and how, too, the mind can influence bodily states and produce either good or bad health.

CHAPTER IV

THE INSTINCTS: PURPOSE, EXPRESSION, REPRESSION AND SUBLIMATION

IN Chapter I we noted that John Locke, in his "Essay Concerning Human Understanding", introduced a theory which ran counter to Descartes' doctrine of innate ideas. Locke, a philosopher of the seventeenth century, disputed the notion that we are born with certain ideas already existing in our minds, and virtually contended that the human mind does not exist at birth. What the child has at that time, according to him, is a "smooth waxen tablet, a *tabula rasa*", which is eventually shaped by his sense-impressions. The older he grows the more such impressions will impinge on his mind and influence his life: his thinking, willing, and feeling. His ideas come only through reflecting on his sense-impressions, so that he must experience many things before he can think; and if he happens to be blind, deaf, and mute like Helen Keller, his range of sense impressions is much narrower than that of a normal child, which means, of course, that his ideas cannot be as comprehensive and forceful. But who would say that Helen Keller was less of a thinker than the average normal person with more sense experiences than she? The fact that she was not less but even more of a thinker, comparatively, suggests that there must be some inner drive within the personality which urges it forward, and to express itself.

This suggestion is maintained by the theory of evolution. If man has evolved from the level of animal life—and this view is more or less acceptable to all psychologists—it would appear that he has inherited those drives which characterise the native strivings of the animal. Students of insect life tell us astonishingly interesting things about the behaviour of bees, ants, and wasps, and the evidence they offer is strongly in favour of a number of innate drives which

are called instincts. For example, the female solitary wasp before mating begins to make a nest if she cannot find one suitable. The nest is big enough to contain her egg and a caterpillar which she has paralysed with remarkable precision, which she may drag some distance, and upon which the young wasp or grub will feed on emerging from its egg. When the nest is complete the egg is deposited with the caterpillar, and the wasp flies away because her work is completed. From the beginning to the end of her activity there appears to be no learning from experience, as in trial and error. The cycle runs smoothly and without any hesitancy.

Now, Locke's theory of the *tabula rasa* cannot explain this behaviour of the wasp, because it is evident that the activity takes place in so spontaneous a fashion as to rule out any idea of learning from previous experiences how it should be done. The same thing may be said of birds when building their nests. Even for the first nest they do not experiment with the twigs which are brought in their beaks for this specific purpose; when once the task of building is started it proceeds along expert lines without the aid of blue print or instructors. This activity can only be explained on the basis of innate drives or instincts; and in the same way much of man's behaviour is understood.

In the wasp we can see three instinctive drives: to build, to provide for the young wasp when it emerges from the egg, and to mate. In the birds at least these three instincts are observed at work in spring-time, though their activity is much more protracted than that of the wasp, lasting over a much longer period, because the feeding of the young is a much longer process, as it is with animals. In human beings the instincts are more numerous, and psychologists differ in their respective lists. McDougall, in his "Outline of Psychology", mentions no less than fourteen, and his definition is: "'An instinct' is an innate disposition which determines the organism to

perceive (to pay attention to) any object of a certain class, and to experience in its presence a certain emotional excitement and an impulse to action which find expression in a specific mode of behaviour in relation to that object." If we accept that definition we can also accept his tabulated list, but otherwise we are likely to reduce or augment it, as the case may be.

Now, when using the term "instinct" we should avoid the mistake of being unscientific and calling such things as interests or hobbies instincts. The activity must be traceable to some similar form of animal behaviour before we can strictly call it an instinct; so that it would be incorrect to speak of an instinct for reading, for music, or for making cakes. The latter are the outcome of intelligence, which is partly the capacity for improving on our past experience; whilst "Instinct is native or inborn capacity for purposive action".

It has been found expedient, for the purpose of simplicity, to speak of three instincts, and to regard others mentioned by McDougall as features of these. They are the self instinct, the sex instinct, and the herd instinct.¹ Each is purposive, and directed towards a definite specific goal. The purpose of the self instinct is self-advancement and self-preservation, that of the sex instinct is procreation, and that of the herd instinct is protection. Let us see how under these three instincts we may place McDougall's fourteen:

<i>Self.</i>	<i>Sex.</i>	<i>Herd.</i>
Escape.	Curiosity.	
Combat.	Acquisition.	
Repulsion.	Food-seeking.	
Submission.	Construction.	
Self-asser- tion.	Laughter.	Appeal. Social (gregarious).

¹ A similar classification is to be found in Dr. Drever's "Psychology of Everyday Life," and in Mr. Weatherhead's "Psychology and Life."

Whilst we may for convenience sake classify the various features of the three instincts, it must be noted that they are by no means exclusive, because they couple up with others. For example, the combative and self-assertive features may be used along with the parental feature of the sex instinct, to protect the young from enemies; so may acquisition or construction, to protect them from hunger and weather. Again, acquisition may come under the heading of the herd, explaining how man may compete with others where wealth is concerned. Self-assertion may be linked with mating, in so far as one may assert the self in a manner of display, to win the attention and affection of a particular member of the opposite sex.

What is important for our purpose is that there appear to be natural forces or instincts within the individual compelling him to act in specific ways, and that he is not at birth merely the waxen model eventually moulded by his sense-impressions in the way Locke—and also the Behaviourists—believe. These instincts are the stream of man's life energy, and if you can imagine a water-jet forcing its way through the crust of the earth and then fanning out into a spray, it will give you some idea of what is happening within our minds. The life stream rises up from somewhere within, and appears in consciousness as a manifestation of the instincts. Since the instincts convey the energy by which we live, it is important that we should never block the channels through which they flow, otherwise the driving force of a man's personality is bound to be weakened. In the fully developed personality—if such does exist—the instincts are free to appear on the conscious mental level, and when it is not opportune for them to be directed towards their appropriate biological end they can be re-directed and their energies absorbed for some other purpose.

This brings us to the subject of expression, repression, and sublimation.

Expression

The normal outlet for the instinct is along the path which leads it to its characteristic goal; that is, the self or ego instinct drives towards self-advancement; the sex instinct, manifesting itself first through mating, eventually moves towards the desired biological end of physical intercourse and procreation; the herd instinct urges the individual to associate with other social beings. But it is not always possible to express the instincts and allow them their natural outlet, even though the urge may be strong at the time. For instance, a man may find natural expression for his assertiveness when he is at work supervising others; but in the army, occupying the humble rank of an ordinary private, he will not be able to assert himself by raising his voice in protest against what the sergeant-major says about him on parade. Unmarried couples exceedingly fond of each other, and wishing to keep faithful to the Christian standards regulating the sexual life of the community, will not yield to the biological urge of the sex instinct; for them to do so would be wrong, and in their present unmarried state they will not therefore adopt the natural outlet for their sex energies. Also, it is not always possible for us to be among men and women, however much this may be desired, nor may it be possible to compete with them, because the point of competing with others is that we can establish ourselves as their superiors and win the admiration of the group in which we are competing.

The expression of the instincts may be primitive or cultured. Among primitive tribes aggressiveness takes the form of warring against others, but in cultured people it can be directed against disease, slums, and social injustices.

The assertive instinct may find a primitive outlet in trying to compel others to submit to our egotistical

wishes; but a cultured expression would be to fit one's self with knowledge and efficiency in one's work or profession, for the purpose of being more useful to the life of the community. In each case the instincts are the same, but the ends to which they are directed are different because of the different levels of culture.

Since, then, it is not always possible or opportune to express our instincts in the natural way, what other alternative is there? Well, there is the way of repression, the way of control or suppression, and that of sublimation.

Repression

When the instinct cannot find a natural outlet there is a state of tension or conflict which may be painful, and it would appear that nature relieves that state by repressing the instinctive urge; that is, by removing it from the conscious level of mental life and driving it into the unconscious. For example, supposing a man is bullied by his employer, his natural reaction, let us say, is to assert himself in self-defence, but this he dare not do, in case he should lose his job. The result is a mental state of painful tension or conflict between the urge to assert and the fear of losing his work. As long as the conflict lasts the mental pain persists, and he is fit for neither fighting nor working; but nature relieves him of his painful state by repressing the urge to assert. Now, it is often asked, Is repression a conscious or an unconscious mental process? The answer is that repression is an unconscious process, because whilst we may wish to forget a painful experience, the fact remains that the process of repression itself is unconscious, in so far as we are unaware of what is happening within our minds.¹

¹ According to Rivers the psychologist ("Instinct and the Unconscious", p. 11), the term "repression" is used for the process by which we unwittingly endeavour to banish painful experiences from

There are, however, a few things to note with regard to repression. The instinct may be only temporarily repressed. If the man remains with his bullying employer, the fear of losing his work will keep his assertive tendency bottled up, but once that fear is removed the repression will cease to exist. On the other hand, the instinct may be permanently repressed, though this is rare, and even then in certain circumstances there are signs of its activity. The permanent repression is the result of continual conflicts between the instinct and some opposing force. The curious child who is repeatedly thwarted when he asks questions about different things in his young life, is likely to develop an attitude of apathy to knowledge. He will grow up in a passive way, refusing to exercise his mind about the various issues of his life, and showing complete indifference to any change in politics, society, or religion. This is why a large percentage of children in uneducated homes grow up as mere automatons in their community. It is equally true of those who in childhood were forbidden to exercise the assertive tendency. When confronted with difficulties, they readily submit, or find some way of escape through illness or reclusiveness, where they feel safe from criticism or situations that may cause them pain. These people are often misunderstood, criticised for their lack of courage and ambition, both of which depend on the assertive tendency.

Again, the repression may be incomplete, and this leads to frequent conflicts, and sometimes to perversions of a serious nature. Think of the sex instinct, which before marriage, and sometimes afterwards, is often in conflict with the ideals of the individual himself and of society as a whole. Every society, from that of primitive man to that of the present day, has

our minds, and the term "suppression" is used for the process which is involuntary, especially when it follows some physical or mental shock.

had its tabus and laws governing and controlling the exercise of this particular instinct. No one has been, or is, allowed socially a free expression of the instinct except within the bounds of sex laws; outside the legitimate sphere of its activity the individual "necessarily comes into conflict" with what his society has decreed for the good of the whole community. There have been cases known where the repression has apparently been complete; but it would be correct to say that in the majority it has been incomplete, bringing the individual into serious and sometimes dangerous conflicts, or urging him to adopt ways and means that are unhealthy and a perversion of the instinct itself. The young couple desirous of keeping faithful to the ideals regulating their sex life are likely to experience many sex conflicts, particularly if their courtship and engagement are protracted for economic or other reasons, unless they know the ways of control and sublimation. They are unable to put this instinct out of action until such time as they can marry; and whilst they may succeed in imperfectly repressing the instinct, they may find an outlet through masturbation, or through some other perverted mode of expression.

One last word about repression. It is harmful. Since the energies of man spring from the instincts, then to repress one or more of them means weakening the drive of his personality. His ability to adjust himself to his environment depends considerably on the instinctive qualities of his make-up. Ideals are of little value to the individual if he lacks the energy to approach them. Therefore repression of the instincts must be avoided if he is to live successfully; otherwise he will fail to master his difficulties, like a motor-car that fails to climb hills because its whole engine is not functioning. Again, if the repression is temporary or incomplete, conflicts are inevitable, and perversions sap the instinctive energies. Conflicts rob the mind of energy and prevent us from concentrating on the

vital issues of the moment. (This is something we all know surely from experience.) Whilst perversions preclude us from healthy interests and distort our knowledge of ourselves and of life as a whole.

Control and Sublimation

What, then, is the alternative to repression when natural expression is not possible? It is the way of control and sublimation. The naturalness of the instincts must first be recognised; this is essential for the success of any control—even the sex instinct is nothing to be ashamed of. When they cannot be expressed they are to be controlled and their energies directed into other channels. Let me explain it in this way. Suppose a farmer buys a vigorous young horse. Its freshness may set him a problem of knowing what to do with it. He is afraid to let it run free in a field, in case it leaps the hedges and runs away. So he can decide either to lock it up in the stable, or harness it to a cart and control its activities with the reins. If he does the former the probability is that the horse will play havoc by kicking down the stable door, or at least by causing trouble within the stable itself. But if he adopts the latter way he can use the vigour of the animal in doing useful work, for which he bought it. Repressing the instinct is comparable to locking up the horse in its stable, but controlling and re-directing its energies when there is no natural outlet is like that of harnessing and using the animal.

To return to our example of the man bullied by his employer but unable to assert himself in the situation, we may ask, What is he to do? He must first recognise the naturalness of the urge to assert himself, but instead of repressing the instinctive energies, he can control them. This, however, demands a second condition, one which calls for some ideal or ideals. He can therefore be helped to control his instinct by

his family ideal. He doesn't want to risk his job, because his wife and children must be decently kept and free from unnecessary privation, so for their sake it is worth while keeping silent and, if he thinks it is necessary, to be on the look-out for another job. The injunction to turn the other cheek is a Christian ideal, and it means not the repression but the control of one's anger. When some one assaults us we quite naturally desire to retaliate, but if the Christian ideal means anything to us we stay our hand, yet without denying our anger either to ourselves or others. In a similar manner other ideals help us to control our instinctive reactions when they are forcibly aroused by some stimulus.

The process of sublimation, which simply means redirecting the instinctive energy into some other channel of activity, is unconscious, like that of repression. The need for this is, of course, consciously felt, though sometimes the process has begun long before there is any awareness of it. For example, some unmarried women, with no knowledge of psychology but happily engaged in nursing, are unknowingly sublimating their sex energies. They have not chosen their profession for this reason, but their interest and activation in the work are a means of redirecting the instinct, which otherwise would produce many a conflict. It sometimes happens that the individual "just drops" into the way of sublimation; but there are other cases where, realising his conflict between an instinct seeking expression and his ideals that forbid it, he is obliged to seek some kind of sublimating interest and activity. In doing this he will find it more successful if he adopts the appropriate and right kind of interest. Let me explain. The sex instinct has two features: the biological or reproductive, and the parental; and sublimation of the instinct must be along the appropriate path. If the biological feature is the one that leads the individual into conflict with social ideals,

then it would be wrong to advise him or her to sublimate by looking after dogs or hens if there are no children available. What is distinctive of the biological feature is its procreative purpose, and since procreation cannot be the end, then sublimation can be obtained along the lines of creative work, such as building-construction, organising clubs, societies, recreational centres, etc. But if the parental feature of the sex instinct is the stronger, the obvious path for sublimation is that which leads to work among young children, animals, birds, and so on. What is true of the sex instinct is equally true of the other instincts when there is no natural outlet for their energies. The mother who is unable to mix with her old friends and societies can well sublimate the social instincts through her deepened interest in her children and home; and the man locked in his cell or isolated can sublimate the same energies through writing, as John Bunyan did, or St. John, who wrote the Book of Revelation when on the isle of Patmos.

Finally, it should be stated here that the thwarted instinct can be directed towards good ends, or misdirected to bad ends. The man bullied by his employer may go home and for some slight provocation bully his wife and children; in which case he would be misdirecting his fighting instinct to a bad end. On the other hand, he may take his gardening tools and work on his allotment with more energy than usual, and here he would be directing the energies of that instinct to a good end. In both cases he would be unaware of what he was doing, and both would provide an outlet for his instinct; but the one would be a mis-direction, and the other a healthy and beneficent one.

To sum up, then, the instincts supply the personality with energies, and it is probable that they spring from some common source. They can be expressed, repressed, or controlled and sublimated. Expression is as dependent on suitable conditions and harmonious

ideals as on the desire for it. Repression is harmful, unsatisfactory, and may misdirect the energies to perverted ends. Control and sublimation are healthy ways of dealing with the unexpressed instinct, providing it is accepted as natural, and re-directed along paths which lead to wholesome, desired and suitable interests.

CHAPTER V

THE STRUCTURE OF THE MIND: CONSCIOUS, SUBCONSCIOUS, UNCONSCIOUS

THE moment the word structure comes to our minds, we think of some material building—a house or hospital, a bridge or a ship. This is quite natural, because the word is associated with concrete things; and when we consider such a phrase as the structure of society we usually think of an upper, a middle, and a lower class, how they rise one above the other, and contact each other at the points of least differentiation. But here we are borrowing the word structure from the material world to explain a fact in the social world, and we see no reason why we may not borrow it to explain a similar fact in the mental world. That there is a structure of the mind none can dispute, because the fact that our memories are accumulative and recoverable proves that there must be a place of conservation from which they can be recalled; and this place reaches beyond the range of consciousness, as will be explained later in the chapter.

The Faculty psychologists, as indicated in Chapter II, thought that the structure of the mind, which of course they equated with the brain, was made up of a number of mental faculties, such as the faculty of thinking, the faculty of willing, of imagining, of memory, etc.; but this conception of the mind is unsatisfactory, because the theory upon which it is based has long been proved unsound. Others have thought of the structure of the mind in terms of awareness and memory. For example, I am aware of writing a letter, and am also able to think about the things of the past about which I want to write. So the structure consists of two compartments, the one of which I am aware—the conscious compartment—and the other in which the memories

of the past are merely stored—the unconscious compartment. Note the word “merely”, because we shall return to it later on. Again, the Behaviourists think of the structure of the mind in terms of agglomerated sensations, all recorded, and their memory traces neatly tucked away in the brain. It is not necessary to repeat what has already been said about the inconclusiveness of the Behaviourist theory; but since there is more to be said for the view that the brain is not the mind nor the mind brain, we need to find some other explanation of the structure of the mind.

Three Levels of Mental Life

By this time you will, presumably, understand that the mind is not something which we can carve up and weigh or submit to any chemical test. It lies outside the realm of the physical world, but that does not mean that we cannot form some idea of its nature and structure, and how it works as a whole. In the last chapter we saw that the energies of the mind are derived from the instincts, and from what is already known of our mental life from human behaviour and through introspection, we can postulate three levels of the mind—the conscious, the subconscious, the unconscious. The conscious level is one of awareness. When attending to something, we are conscious or aware of what we are doing. At the moment I am trying to think of a suitable illustration of this point. I can now think of many, but which one shall I give to bring out the meaning clearly? Here is one: I am conscious of holding my pen and looking at my manuscript, also of my purpose in writing this chapter. But on the conscious level there are two areas—the focal and the marginal. The focal concerns that part of my consciousness which is concentrating on some definite thing, and the marginal is concerned with the things that lie outside it. For example, as I write

here in the Leeds University library, my focal consciousness is concerned with writing these actual words; but outside this field of concentration—that is, in the marginal area—I hear a student near by turning over the pages of his manuscript, I hear noises of students getting up and going off, presumably to their classes, fluctuating noises of the traffic outside, and of aeroplanes as they break in upon my conscious mind, and when they approach the point of the focal area they interrupt my concentration and disturb my thoughts. Since, then, there are these two fields or areas of consciousness, it is advisable, when one wants to concentrate on some special piece of work, not to allow in the marginal field any stimuli which will intrude into the focal, otherwise one's attention is bound to fluctuate.

The subconscious stratum of the mind is the area which holds those memories that we can recall at will. Generally they are of recent experiences within the last few days, or weeks or months. For example, you find no difficulty in thinking about what you did with your spare time yesterday, or where you went for your holiday some weeks or months ago. Recent experiences, unless automatically repressed for some reason, are always recoverable at will. But the more distant ones, which made a strong impression at the time, can also be recalled. There are, of course, many experiences that strongly impressed us when we were children, or in our teens, and which for a time were easily remembered; but now, after the lapse of some years, they cannot be recalled except with effort or through the aid of some technique. However, for the purpose of simplicity it can be said that the subconscious level of mental life which lies immediately below that of the conscious is a conservatory of memories which can be brought back into consciousness at will.

Finally we come to the level of the unconscious,

which must not be regarded as distinctly apart from that of the subconscious, but rather as fusing into it at some unknowable point. It is indeed difficult to say where the one begins and the other ends, but they are separated for convenience and clarity, as we seek to understand the different levels of our mental life. Now, the first thing to be noted about the unconscious level is that it is a storehouse for all past experiences that cannot be recalled at will. Strictly speaking there is no experience that is forgotten beyond recall, providing it made some impression on our minds at the time we had it. It is now known that even the impressive experiences of infancy can be recalled in an adult when hypnotised, whilst those of early childhood can be recalled without the aid of hypnosis.

There are, however, other facts to be considered in favour of the unconscious mind hypothesis. A name which eludes all effort to recall it often springs on to the conscious level if left alone. The name must have sprung from somewhere, and since it could not be recalled at will, it must have been outside the subconscious in that realm we call the unconscious. Again, problems which we sometimes fail to solve consciously, seem to solve themselves. Most students of mathematics have experienced this phenomenon. At night-time they struggle to solve a mathematical problem, and, feeling too tired to pursue the riddle, they give it up for a night's rest. Sometimes they awaken, even in the middle of the night, with the answer on the conscious level.

Then, finally, there are those evidences which Dr. Drever in his "Psychology of Everyday Life" calls the "Spiritistic Manifestations". These are:

(a) **Hypnotic Phenomena.** A young man in an hypnotic sleep had recited to him a poem of eight four-line verses. The reciting was repeated about six times, and when he awakened he remembered nothing of

what had been done whilst he was asleep. But some weeks afterwards he felt an urge to recite a poem, which turned out to be that which had been recited to him in hypnosis, though he was at a loss to know how he had come to know it.

(b) Automatic writing provides evidence of a conservatory for thoughts which lie outside the realm of consciousness. When a person is so writing he may be aware of what his hand is doing. He may feel it move as it writes, but he is not conscious of what he is writing, and may be consciously engaged in conversation about some entirely different matter at the time of writing. The thoughts are coming, therefore, from outside the field of consciousness in much the same way as they came to the man who in a post-hypnotic state recited the poem.

(c) Crystal-gazing, which has been practised throughout the centuries. The gazer is able to see pictures in the crystal before him; but if we remember that what he is seeing is built up out of his past experiences, then a great deal of the mystery element disappears. His picture can be analysed, just as dreams can, into memory elements, all of which are to be found outside the field of consciousness.

(d) The last of the spiritistic phenomena is the evidence of the "dual or multiple personality". The writer knows a woman of double personality. Seeing her husband off by train, she said good-bye to him at the railway-station. The next thing she knew was finding herself, in her normal state of mind, in a town unknown to her, but in which she had then been for some days, living as an unmarried woman. Each personality was unaware of the other, which proves that whilst one is active, the other is residing passively somewhere. The subject of multiple personality is even more interesting. On one occasion I hypnotised a man whom I will call Mr. X. When he was hypnotised he was another personality, Mr. Y., with

no knowledge of Mr. X.; and on waking up he was Mr. Z., who knew nothing of Mr. X. or Mr. Y. This splitting of the whole personality is one of the dangers of hypnotism, which ought never to be practised by untrained and unskilled people. But to return: The fact that there is such a phenomenon as multiple personality is evidence of a mental level other than consciousness, where the components of the different personalities are concerned.

Now, the second thing we must note about the unconscious level of mental life is that it is not only a conservatory of what appears to be forgotten memories or experiences, but that it conserves mental states that are purposive and active. Freud, who was chiefly concerned with the unconscious mind as the store-house of mental causes for a nervous breakdown, maintained that there is a striving in the unconscious, and that the same mental laws are at work here as on the conscious level. For those who accept the Hormic psychology this is an unescapable conclusion, because, quite apart from the hidden activity of the instincts which find their way on to the conscious level, the apparently forgotten mental experiences are also active. Let us take the problem set aside by the student because he is either tired of trying to solve it, or has not the time to think it out any further. Some time afterwards, without any related conscious activity on his part, the answer presents itself. The only explanation that can be offered is that some unconscious mental activity must have been going on beyond the threshold of consciousness.

Freud in his "Psychopathology of Everyday Life" gives numerous examples of the fact of unconscious activity. The forgetting of names, dates, and things is sometimes to be explained in this way. A friend of mine once promised to open a discussion at a meeting of clergymen. He failed to appear on the appointed day, and was greatly disturbed when he was told of his

absence. Reflecting on the state of his mind when he made the promise, he confessed to me that he felt tired of public speaking, and wished he could avoid having to make another promise to do so. It seems, then, that this forgotten wish was the unconscious motive for failing to appear at the meeting. When we forget the names of people, it may be that we did not pay sufficient attention when hearing them for the first time; but it may also be the result of unconsciously associating the name with some one whom we once knew and did not like.

Sometimes we take an immediate dislike of a person to whom we are introduced, and unless we happen to know something of psychology we are at a loss to know why. Of course, it would be most unscientific to say, as some do, that our dislike is instinctive, and to pride ourselves on our ability to sum up people the moment we see them. Sometimes this may be true, but much more often it is not true. The real explanation of what is often loosely called "an instinctive dislike" of certain people whom we meet is to be found in terms of unconscious activity. For example, I remember a man coming to consult me about a psychological difficulty he was experiencing; he was not in my room long before he frankly said, "I don't like you." Had I not been a psychologist his remark might have greatly troubled me. However, I persuaded him to let an analysis of his mind supply him with the reason for his immediate dislike of me. It was not long before we discovered that he was unconsciously associating me with a man who had caused him much unhappiness in his boyhood. Now, what we want to note at this juncture is that an impression of some object or person on the conscious level of our mental life may be spontaneously related to some memory or experience residing in the unconscious, and this is possible only because there is a mental activity of which we are not aware.

The whole psychological theory of dreams is based on the assumption of unconscious activity, because, as we shall see later, the whole setting and form of the dream is purposive, and is the result, therefore, of a mind at work. Let us leave the subject of the dreams for the moment, and consider further some of the "spiritistic phenomena" mentioned above.

A girl, hypnotised by the writer, was told to write a letter (which he dictated to her while in the hypnotic state), after fourteen days in her waking state. She was told to send it to a particular friend of his, and the name and address were also dictated to her. On awaking she knew nothing of what had been suggested, and it was not until the fourteenth day that she felt the urge to do as she had been directed. The letter was written—why she did not know, except that it had to be sent to a certain man whose name and address were unknown to her. It can be rightly said that her post-hypnotic behaviour at the time of writing the letter was automatic; she worked like a machine, but not the kind of machine which is descriptive of Behaviourism. Nevertheless, she behaved in accordance with what had been dictated to her, and which was active in the unconscious mind on the fourteenth day.

Perhaps it should be stated quite clearly here that no hypnotised subject will carry out any suggestion, either when asleep or when awake, which conflicts with his moral self, his principles and ideals. The cinema and also the novel have distorted what is actual fact. One can use one's imagination outside the realm of actual things, but its products are then always imaginary and not factual, and for that reason they must be rejected. I have never, in many years of psychological work, found one subject who would carry out a hypnotic suggestion which conflicted with his moral beliefs. A man under hypnosis recalled an experience of being thrashed by his father. On

awaking he remembered the hypnotic dream as a real experience of his past life. At this next interview, when in hypnosis he refused to recall any such further experience, and on awaking and being told of this he said to me that to have done so would have been disloyal to his father. In fact, it can be stated that under hypnosis the patient's moral will is reinforced as though he were on guard against any violation of his character.

There is evidence, then, for believing, as Freud believed, that the same mental laws are active on the unconscious level as on the conscious. That the girl should have felt the urge to write the dictated letter in her post-hypnotic state suggests a mental striving outside the realm of her conscious life; and the fact of her doing it on the fourteenth day further suggests that in addition to the striving there is present an unconscious ability to calculate time, just as there is an ability to reason with figures in the unconscious solving of a mathematical problem. It is reasonable, therefore, to conclude that outside the conscious mental area there is a vast store-house which conserves all the memories of our past experiences, and that within it there are mental laws operating in much the same way as they operate on the conscious level. We give this vast store-house the name "unconscious mind", because we are unaware of the activity which goes on within it except in so far as we are able to observe its results.

The theory of unconscious activity helps to explain many peculiarities of our behaviour, particularly the compulsive features. A woman once shook hands with a man to whom she was introduced for the first time. Immediately she shook his hand off, and reacted to him in such a startling manner that he stood back, perplexed and embarrassed. A friend promptly asked her why she behaved in this way. For a time she could say nothing more than that the stranger's

hand aroused her fury for some inexplicable reason. Later she recalled being hurt by a woman who had twisted her hand; the handshake of the man was like the grip of this woman's hand, and it awakened in her a forgotten painful experience which had been repressed by her unwillingness to reveal at the time what she felt.

We have already considered the necessity for a correct sublimation of the instinctive energies. Sometimes a misdirected sublimation is due to a forgotten experience which remains active in the unconscious. Some years ago a young girl appeared before a magistrate for stealing from a large store, and was sent to a home for delinquent girls. She was placed in the care of a psychologist who diagnosed her trouble as kleptomania; that is, impulsive stealing which is beyond the control of the criminal. Incidentally, when criminals behave in an anti-social manner for some impulsive reason, they are the victims of moral disease and are not to be judged as deliberate offenders capable of controlling their actions. No amount of punishment or confinement to prison will ever change them; their cure lies in the kind of psychological treatment that releases the repressed instinctive energies from their misdirected purpose. This was what was eventually done for the girl above. She was brought up by parents whose attitude to sex was extremely repressive. Sex questions were promptly quashed, and any reference to the subject was met with abhorrence. When the girl went to work from school she was placed alongside another girl who delighted in telling smutty sex stories and her own sordid experiences. The girl's sex curiosity and feelings were aroused, but only to be promptly repressed by the fear of her parents. The other girl, in addition to her perverted sex feelings, was a thief and sometimes bragged of the way in which she stole money from her employer. So in

the mind of the girl who was guilty of theft, sex and stealing were confused, and later, when the repressed feelings strove to gain an outlet, they compelled her to steal.

It can now be stated quite definitely that all personality misfits of a psychological nature are due to what are regarded as unconscious psychological patterns. There are, of course, other misfits which must be attributed to congenital or glandular defects. But the psychological misfits are the result of wrong adaptation in childhood. Let me explain what is meant by this. Sooner or later the child comes up against situations to which he cannot adjust himself. It is difficult for a little one to accept the intrusion of his baby brother or sister. He no longer holds the whole affection and attention of his mother or nurse, and to regain his loved object he will, through trial and error, behave in a way that will gain for him the desired end. Let us suppose that he adopts the way of screaming. He will go on using this method whenever he wants what is, for some reason, withheld from him. He will grow up, using this same method for a similar reason, and in adulthood he will readily lose his temper when he cannot have his own way with others. But should he discover in early childhood that his crying attacks are ignored, he may resort to illness, as in the case of a boy who complained bitterly of back-ache when he wanted his mother to fuss over him. As a man the same illness appeared every time he wanted the affection of those around him. If perchance he quarrelled with his wife, the unhappy relationship was brought to an end by the same illness. One thing needs to be appreciated—the illness was not latterly designed, as in the days of childhood. It was an unconscious reaction to a situation which thwarted the personality, and it is useless to blame the individual for what has become a psychological mechanism. He can be released from the mechanism only by a mental

analysis which will reveal the method he adopted to gain his end in childhood.

There are, however, many such mechanisms, and perhaps I need mention only two others to establish this fact. The one is rationalisation, and the other is projection. Rationalisation is a defensive mental process which seeks to justify an act or opinion on grounds that may be true, but are not the real truth. The story of Reynard the fox who, failing to reach the bunch of grapes he desired, went away saying "They are sour, anyhow," is an illustration of this. So is the golfer who blames his club for his bad drive. In a sense the conscious mind is deceived into believing something which is really an excuse to cover up the wrong or blameworthy motive. The process of deception is unconscious; that is why the rationaliser is unaware of his defence. A young man wants to enter the medical profession because he desires to help suffering humanity, but his real reason is to have authority and power over others. His desire, then, is a rationalisation for his unconscious but true reason. Let us avoid thinking that all our conscious reasons for acting and holding opinions are rationalisation. Some may be perfectly genuine, and others not. The principal clue to whether a reason is genuine or false is the emphasis that is put on it. When an individual goes out of his way to defend stoutly a position that is contrary to actual fact, and his defence is coloured with emotion, the probability is that he is rationalising.

One of the most interesting cases that has come my way recently is that of a young man who was unable to wear any new garment because it set up a skin irritation where it touched the body. Now, when he wore more than one new garment the irritation was only associated with one of them, and further, whenever he was profoundly interested in somebody or something the irritation entirely disappeared. His defence, that is, his rationalisation, was that there

must be something in the new garment which set up this skin irritation. But the real reason was that he was endeavouring to justify having to wear second-hand clothing when he was young. His father died at an early age, and the mother was able to provide only second-hand clothing for him; but his sisters got new clothing. As a young lad he was deeply humiliated by this condition of poverty. Among his playmates he tried to appear at least their equal, and had it been stated that he was wearing second-hand clothing he was ready to defend himself by saying that his skin was much too sensitive to wear new. When he grew up and was able to buy new clothes, his rationalisation got in the way and prevented him from spending money unnecessarily. This kind of mechanism is common to all our minds in a greater or less degree, and, as I shall point out in a later chapter, we shall be the better for coming to grips with our rationalisations when we perchance spot them or they are pointed out to us.

Projection is also a common mechanism, and it may prevent us from seeing things as they really are. When we project we read into the minds of others our own feelings, desires, and opinions. Of course we are not aware of what we are doing, because this mechanism, like rationalisation, is definitely an unconscious process. This can best be explained by another illustration. One night, after the sirens had gone, my little girl aged seven came down and said she had a pain in her "tummy". I proceeded to point out to her that the pain was, in her case, the result of feeling afraid that German aeroplanes would come over and bomb us. Nothing more was said. But a few weeks afterwards she came down again on hearing the siren's wail. No mention was made of any pains until after I had returned from outside, when both guns and aeroplanes were quiet. C. then said: "Are you quite all right, Daddy?" "Yes, thanks." C. "Well,

you look as though you have got a pain in your tummy." This was an obvious projection on the part of C., but it would have been stupid to have told her so, because she was unaware of what was happening in her mind. Personal failures are easily projected on to others. The business man who fails to secure a much-desired contract with some firm because of carelessness may come down heavily on his child for not securing first place in his class at school. Children are often the victims of the parents' projection. The writer is reminded of a woman who, walking through a park with her adolescent daughter, met some friends of a higher social class. They stopped and talked for a few moments. But when the mother reached home she criticised her daughter before the rest of the family for looking embarrassed in the presence of their friends. As a matter of fact the girl was quite undisturbed. It was the mother who really felt the embarrassment, but, refusing to recognise this, she projected it on to her daughter.

The psychological mechanism of over-compensation is another manifestation of the activity which goes on in the unconscious part of the mind. But since this is closely related to the inferiority complex, we shall deal with it fully in Chapter VIII.

To sum up, then, it can be said that whilst we have not any exact knowledge of the mind's structure, there are evidences for believing that there are, broadly speaking, three mental levels which at some point fuse into one another as do the three levels of human society. They are: (a) The conscious, which is active when we are aware of what is happening, and which has two areas—the focal, or area of concentration, and the marginal, which casually attends to extraneous stimuli; (b) the subconscious, which retains those memories that can be recalled at will when needed; (c) the unconscious, which conserves memories that are beyond the reach of the will.

Here, experiences which made an impression on the conscious self at the time of their happening are not only conserved but are active in the sense that they influence the conscious behaviour. The evidences for this unconscious conservation and activity are numerous in the realm of man's behaviour both normal and abnormal.

CHAPTER VI

THINKING, REMEMBERING, IMAGINING

IN every conscious mental experience three factors are operative. They are affective, conative, cognitive; or feeling, willing, thinking. All three are present, though one or other may predominate. Like three billiard balls at the bottom of a basin, if one is stirred the other two are disturbed. For example, you hear the cry of a child in distress; you immediately feel sympathy for it (affective), then you will go to it, (conative), and you think of what you can do to help it (cognitive). In this experience feeling is the predominating factor. Again, on seeing a crowd you will to act by joining it (conative); the object interesting the crowd is perhaps a motor accident; you ask questions, that is, you are thinking about it (cognitive); and you feel it either worthwhile or otherwise to do what you can (affective). Here it is the willing factor that was first stirred. Further, suppose you are listening to and thinking about an appeal on behalf of the repressed peoples of Europe (cognitive); you will probably feel moved to pity for the sufferers (affective), and respond by doing what lies within your power on their behalf (conative). Should you think the appeal does not concern you, you may feel indifferent and decide to do nothing about it. This is a predominantly thinking experience. It may be that at times these factors do not seem to be present, but this will depend on the nature of the experience. If it is impressive, then their presence will be very marked; but if unimpressive, as many of our experiences so often are, their presence will scarcely be noticed. Nevertheless, whatever the nature of the experience, our response to it involves some degree of feeling, willing, and thinking.

When we consider thinking, we note, in passing, three cognitive levels: the perceptual, the ideational, and the conceptual or reasoning level. Let us look at each of these different levels of mental life, which rise from the fish to the dog and thence to the human being.

Perceptual Thinking

Perceptual thinking, or, as it is usually called, perceiving, is the simplest of the three types of thinking, but nevertheless highly important, even for human beings, since the major part of our activities is on the perceptual level. It is circumscribed by two things: (a) it is always an experience of one single undifferentiated object; and (b) the object must always be present. I see a man sitting at a piano—here is a present, single object; but if the man should start playing I may want to listen to his tune, that is, perceptually think about it. But I cannot think about the tune and the man sitting at the piano at the same time. Some selection must be made, or all three must become one single object—piano plus man plus tune. Neither is it possible for me to think perceptually about the tune, unless I am actually hearing it. When I am away from the scene of the man and the piano and musing about the tune I have heard, my thinking has shifted from the perceptual level to the ideational level. Therefore I think perceptually, or perceive, only when I hear, see, touch, smell, or taste something here and now, I do not even perceive the moon the moment it is hidden away by the clouds. I can think of it—but my thinking is then on another level.

Now, the product of perceiving is called a percept, and at first it would seem that it is very much like a mental photograph of the object that is being perceived. This is not strictly true, because what might

be regarded as a mental photograph is affected by two subjective or personal factors: (a) by the past experiences of the perceiver in relation to the object; (b) by his personal feeling in regard to it. For example, you see a whitish crystal substance before you. Now, unless you have had some previous experience of that substance, you have only a number of sensory experiences of colour, shape, and position; but if you have had some relative experience, then you will recognise it as salt or sugar. So what you see is influenced by what you have earlier experienced with regard to it. Also, by what you feel about it. X.'s percept of that same white substance will be different from Y.'s, because he does not like sugar and Y. does. Similarly, the kind of interest in an object helps to shape and colour the percept, when thinking perceptually about it. For example, a farmer looks at a cornfield, and his percept is to be described in terms of work and food. The artist looks at it differently, because he feels differently about it, and his percept would be described in terms of art: colour, light and shade, etc. Even familiar objects are perceived differently by people who have different interests. It is not unknown for the witnesses of an accident to differ in their accounts of what they heard or saw; and the difference is due to their previous experience of similar situations, and emotional reaction to or interest in the present one.

Ideational Thinking: Remembering, Imagining

Now, when we recall our past sense experience we move from the level of perception (which, incidentally, fish cannot do), to that of ideation, where we use images which are like mental pictures of what we have perceived. This level is attainable for the "higher animals" like the dog and ape, just as for the human. But no image is possible without a corresponding

percept. During the war my little girls had an apple for breakfast. This was a rare treat. C., aged eight, said to M., 3½ years old, "Oh, M., it tastes like a banana." But M., who is too young to know what the word banana means, replied: "What is a banana, C.? Mine tastes like a pear." The taste of the apple aroused images of percepts, but in each case the image was possible only where preceded by a corresponding perceptual experience.

We are not able to recall all images with the same vividness. Experiments performed with different people show that visual and auditory images are more common than those of smell, taste, and touch; and some people show a peculiarity for visual memory, whilst others show it for auditory memory; for example, when they see the word "violin", some see the instrument, others hear the sound. To one who quotes from memory, a visual imagery is particularly helpful, because he can recall the words and see them in their context; to the musician an auditory imagery is most useful, to the chemist an olfactory is most serviceable. It is possible, however, to develop the weaker imagery by constantly exercising the memory along the desired path, and in some cases this is necessary, especially for students whose imagery is not so strong as it should be for their particular work.

Before dealing with the subject of remembering, it is worth noting the differences between the percept and the image:

Firstly, the percept is the mental product of an object bound up by its situation, of which we are aware; that is, as with an emerald set in a cluster of other stones, we see the emerald, but cannot ignore the others. The image is detachable in the sense that I can think about it without necessarily relating it to other things. For example, I can think about the emerald without its cluster, or about a violin without thinking about the shop where I saw it.

Secondly, the percept cannot be controlled as an image can. Of course I can choose to turn away from my present perceptual experience; but as long as I remain in it I have no control over it. For example, if I choose the risk and am caught in an air-raid, then I cannot mistake the crashing noise of a bomb for the sound of a piano. Or, if next morning I decide to look at a house that has received a direct hit, I perceive it, and can only perceive it, as a house that is damaged or in complete ruin; but even as I look at the demolished building before me I can still imagine it (though it may be difficult) as it was before the raid began. The reason is that the image can be controlled, but the percept, which is a product of my immediate sense experience, cannot.

Thirdly, the percept is vivid, particularly if it comes within the field of my focal consciousness; it is then distinct and clear. But the image is generally sketchy. You can easily test this for yourselves. If you look at an object and then try to visualise it, the image is not as decisive and clear as the actual sight of it was.

Fourthly, the percept challenges us in the sense that we must attend to it. The telephone bell rings, and however much I may want to ignore it I still hear the ringing, and I must decide whether or not to answer it. But I can toy with an image, think of it, put it aside, without feeling any challenge to do something about it.

Now, remembering is dependent on past experiences, that is, upon percepts and images. Therefore one of the reasons why we fail to remember certain things is that they were never sufficiently impressed upon our minds as perceptual experiences in the first place—which means that the law of vividness did not operate—and so the corresponding images are extremely vague and shapeless. There are three reasons why the percept cannot be remembered *via* the image:

(a) It did not, in the first place, come sufficiently into the focal field of consciousness, which was **then**

occupied with other things; for example, hearing a clock ticking in a room whilst I am reading a book is not as easily remembered as the book which occupied my focal consciousness.

(b) There may be some unconscious reason for not paying attention to it; for example, a name fails to register in our minds because it is associated with some past unhappy experience, or because the pronunciation of it is hard to grasp, and we immediately refuse to attend to it.

(c) The unconscious activity, as already pointed out in Chapter V, may produce a gap in the memory, even though the experience was vividly impressed upon the mind at the time. A man suffering from claustrophobia—that is, a fear of enclosed spaces—had lost track of an experience in childhood when he was locked in a small room. The experience was vivid, but also terrifying; it was repressed and removed from the conscious level so that he might never think of it again. The repression of experiences for some purpose is a very real reason why we cannot remember certain past experiences.

In addition to the *law of vividness* there are others which determine the extent to which we can remember. They are the *laws of recency* and *frequency*. It is a fact of experience that we can remember more readily the events of a week ago than of a year ago (the law of recency). Though in old age it appears easier to recall the experiences of childhood than recent ones. The reason for this is that interest in the present wanes as we grow older, or, to put it in another way, older people reflect upon the past as their present activities decline. It is also a fact that the oftener we experience the same thing the easier it is to remember it (law of frequency), and the corollary is equally true, that the oftener we remember an early experience the easier it is to recall it at will.

Remembering, however, is not only dependent on

what we retain in our minds, but also on the bonds of association. One thing recalls another, and if we continue the process of remembering, it is amazing what past memories find their way to the conscious level. The technique of psycho-analysis is based on association; when the patient is being analysed by the psychological method he is persuaded to let thoughts come into his mind without criticising them, and each follows on the track of the previous one because of some bond of association that holds them together in the mind. One may speak of *laws of association*, and for the purpose of remembering we must think of two laws—that of *contiguity*, and that of *similarity*.

The law of contiguity simply means that if two experiences have happened about the same time or in the same place, when the one is remembered the other is also. When friends get together they may spend a whole evening remembering a holiday they mutually enjoyed touring the Swiss lakes. It is easy for them to recall their experiences because this particular law is operative. In some people's minds the law of contiguity is greatly exercised—much to the displeasure of those who are obliged to listen to what is said! When they speak about some experience they persist in enumerating detail after detail so clearly contiguous to one another that they bore their listeners.

The law of similarity functions when two experiences are remembered at the same time because of their resemblance to each other. I see Mr. X. at a public meeting; he reminds me of another meeting which I attended some months before, not because he was then present, but because he is similar in appearance to the speaker at that meeting. In Chapter V I quoted the case of a man who said he disliked me and couldn't say why. The analysis revealed how the law of similarity was exercised, unconsciously linking me up with a forgotten cousin. The old adage "like produces like" is definitely true

of our remembering, since the law of similarity recalls for us those experiences that have some measure of resemblance.

There is to my mind a third law, which should be called the *law of "continuity of interest"*. Miss A. reminds me of her employer, Mr. B. I have never seen them together, therefore the law of contiguity cannot function here, in any temporal or spatial sense; neither does the law of similarity, because they are by no means like each other. All that I know is what Mr. C. once told me, that Miss A. works for Mr. B. It is because of this law that I am able to remember a particular subject much better when I read books related to it, and even other subjects which are closely bound up with it. For example, we have considered the instincts of man; the more books we read about the instincts the better we shall remember the subject; and better still if we read animal psychology, which is closely related to human tendencies.

To recapitulate: Remembering is a reproduction of past perceptual experiences *via* the mental imagery which varies in kind from person to person; in some the visual is predominant, in others the auditory kind is strongest. But remembering is possible only because past experiences are retained or conserved outside the level of consciousness. It is easier to remember vivid, recent, and frequent experiences than their opposites. Remembering is also dependent on the laws of association, which are three—contiguity, similarity, and "*continuity of interest*". The reason why we are unable to remember certain experiences is that they failed to impress us at the time with a sufficient degree of vividness, or because of some unconscious activity, rejecting their impressions or forbidding their direct return to the conscious level.

Let us now proceed to consider imagination, which differs fundamentally from remembering by the freedom it enjoys. It is the function of the latter to repro-

duce images that are identifiable with past experiences; but the former can construct a mental picture from these images and relate it to the future, as, for instance, when we think about building a new house which we have never seen. There are three principal types of such a process:

(a) *Separation or subtraction.* I may admire a house I have seen, but dislike its setting. Imagination enables me to see it outside the city and surrounded with a beautiful garden.

(b) *Combination or addition.* The house I like may lack certain facilities, so my imagination supplies these.

(c) *Substitution.* In my imaginary house I substitute the bedrooms on the top floor with a large recreational room for the children.

Here, then, we have three different constructive processes of the imagination. Let us now see for what purposes it may be used. These are five: imitative, creative, pragmatic, æsthetic, idealistic. When I narrate a story which I have heard from some one else, I imitate in the sense of keeping to the structure at least of the story, though my imagination may present different touches of detail here and there. If, however, my purpose is creative, then I produce, not what I have heard or read, but something that is my very own, and for the very joy of it. Now, if the work of my imagination is for some specific practical purpose other than giving me joy, it is pragmatic, and here I must pay due regard to what is real and actual. The architect exercises his imagination for some pragmatic purpose when he draws his plan for a new hospital, but he must pay due regard to what is attainable as well as attractive. He can, of course, set aside his pragmatic purpose and produce something of an æsthetic nature which is not governed so much by real things. This is true of many an artist. Here he is freer in the use of his imagination, though its

product may not be truly representative of life. On the other hand, the work of an author's imagination may be remote from life as we now know it, but not beyond human reach. The social idealist uses his imagination for the purpose of creating a new world. His ideal may, of course, border upon phantasy, through its disregard for what is real, and whilst it may interest or even fascinate others, it is not likely to gain their approval. When the imagination steps outside the bounds of real things and possibilities it becomes phantasy. This, incidentally, is truly characteristic of childhood before the age of ten. Children use their creative imagination to build fairy-lands in which they live until they are called back to a real world where they eat their real meals, wear real clothes, and live with real people and things. So idealistic imagination may fuse on the one hand with the pragmatic, on the other with phantasy.

Imagining, then, is a necessary process of all mental life, because it is a means whereby we can reach into the future from the present, by it we see dimly what possibilities lie ahead of us, and without it there would be no such thing as progress and the conceptual thinking which follows upon it, for the simple reason that our minds would be rooted in the past and circumscribed by the present.

Conceptual Thinking

It has been said that thinking is a form of behaviour in so far as we respond intellectually to percepts, images, and concepts. This in effect means that thinking is a mental process on three different levels—the perceptual, the ideational, and the conceptual. On the first it is tied down to the actual experiences of the moment; that is, to the experiences of hearing, seeing, tasting, feeling, and smelling. On the second level it is freer, as we have just seen from the different ways

in which the imagination can be used as it creates and constructs mental pictures from the different images. Thinking on the conceptual level is freer still, and it is concerned, not with percepts and images, but with concepts and their relation and meaning. Now, a concept is a general idea which is arrived at through a process of mental abstraction from a number of things which have certain common elements. For example, by comparing a number of men and abstracting their common qualities we arrive at the general idea or concept, Man. We can think of other concepts, such as woman, home, work, and then proceed to see how they are all related to each other—man to woman through marriage, home to work through family life. The meaning of concepts may change; for example, it might have been said that the concept man meant a grown-up person who wore trousers, but now that women sometimes wear trousers that meaning is no longer true. Therefore some other common factor must be sought to differentiate man from woman, and some reference to the physical differences between the sexes may provide the answer to the problem “What does the concept Man mean?”

There are two kinds of concepts, the Psychological and the Logical. Miller, in his “Psychology of Thinking”, says: “The psychological concept may be defined as one which has arisen unreflectively in the give-and-take of experience, and in which the elements of meaning have consequently not been brought fully and explicitly to consciousness.” Men and women who have gone to church and worshipped God all their lives, and have been surrounded by like-minded people, may speak of the “religious instinct”, but this is a concept formed unreflectively, and without a clear understanding of the meaning of the word “instinct”. The logical concept is the product of reflective thinking, or, as Miller puts it, “The logical concept may be defined as one which has arisen as the

result of reflective reconstruction, and one in which the elements of meaning have, consequently, been brought fully and explicitly to consciousness, and have been formulated in the mind." So the reflective thinker, knowing that the concept "instinct" means a particular feature of human behaviour that is traceable to animal behaviour, would not speak of a religious instinct, but of a religious need, appetite, or sentiment. Now, this does not mean that all psychological concepts are false, and all logical concepts true, because, as Miller points out, "The psychological concept of engine, built up gradually and unreflectively in the daily experience of the engineer, may be very accurate indeed; while we know that many logical concepts of science, carefully and reflectively worked out, have been, from lack of adequate data, very inaccurate." Nevertheless, we do expect a greater degree of accuracy in the logical than in the psychological concept, and the purpose of education is to teach students how to pass from the psychological conceptual thinking to the logical.

When we pass from the psychological to the logical concept we are thinking on a higher level than when dealing with perceptual experiences or with images. Here we are analysing, abstracting, and synthesising relevant elements. For example, if we are asked to paraphrase the leading article of a newspaper, we proceed to analyse what has been written, abstract those thoughts which are of importance, and synthesise them into a whole which represents the view-point taken by the writer. In all this, reasoning or thinking on the conceptual level is involved, just as it is in inference or deduction. When a leading politician says that the war will cost us a great deal in blood, sweat, and tears, I infer that he is truly conversant with those facts that call for such sacrifice on our part. If, however, we are told that the enemy shows signs of weakening on the battle front, and that his

resources of food and armaments are rapidly diminishing "at home", then I deduce from these facts that before long he will be completely defeated.

When we think on the conceptual level it is because we are wanting to know the hidden meaning of life, its different aspects, and its foundations; and before we can begin to think in this way we really want to be clear about what we want to know; that is, we first want an understanding of the problem before us. In studying psychology the real issue is to understand the mental processes and behaviour, or to find out what the mind is and how it works. Having got the problem clear, we proceed to find the answer to it. Through reading and gathering together the different theories of instinct, of conscious, subconscious, and unconscious levels of mental activity, of emotions, etc., we continue to search for ideas that will produce the answer to the problem. With the results of our inquiry we produce a hypothetical solution through the medium of our creative and constructive imaginations. This kind of solution is like the hypothesis of the scientist, which must then be tested by the facts of our mental life, and it is only when the hypothetical solution or hypothesis can fulfil such a test that it can be claimed as the satisfactory answer to our problem.

But before we can think we need language, because words are not only the vehicles of thought, they are necessary for retaining in our minds those qualities which have been abstracted and synthesised. One writer, Stout, says that language is the "instrument of conceptual analysis and synthesis". Like the motor habit of walking, language has to be acquired. It begins when the child starts to make vocal sounds and to copy or imitate what it hears. These vocal symbols are correspondingly associated with objects, and later act as substitutes for them. For example, the child associates the sound "doll" with the little plaything with arms and legs, body and head, which it

holds and sleeps with. Later, when it wants its playmate and cannot see it, it says "Doll, doll," thereby substituting the sound "doll" for the actual thing, and of course by so doing it makes others aware of what it wants. Now, if the child's every need were known and fulfilled, language would be unnecessary; but sooner or later the child comes into contact with his environment in an active and curious way, and he then needs language for expressing what he increasingly feels. The kind of sounds or language which the child will acquire depends naturally on his environment. One does not expect a child to speak Dutch if the language around him is English. What is important, however, is that he should be taught early the correct use of words, because, since each word is a symbol for a particular thought, thinking and speaking are very much facilitated by exact words. For example, correct orders cannot be given to others unless we have thought clearly what it is we want done. The line of mental communication between ourselves and others is language, and without it we should live in isolation. When we narrate a personal experience to others, we, with the help of words, separate different aspects of the experience, relate them to each other, and so construct a picture of what we wish to convey to them. The picture is then transmitted from us to them through the words we use, and these arouse corresponding images in our listeners' minds. In this way they are able, in some measure, to understand the situation in which we were and, in some degree, to imagine the experience for themselves.

One last word: Much of human thinking is not thinking in the strict sense of the word, but is due to the constant repetition of words which have little or no meaning for the speakers. For example, the way in which some people recite the religious creed, or any other creed for that matter. We may say that this kind of thinking is the product of habit; the

mind merely attends to a stream of words which flow without effort or even meaning. But in conceptual thinking ideas do not flow into words as in the use of catch phrases; they are first selected, rearranged, and ordered according to the purpose of the moment. For example, the reciting of a creed may involve only language habits, the result of constant repetition; but the giving of an address depends on the ability to select and rearrange ideas, which are then expressed through the choice use of words.

CHAPTER VII

THE EMOTIONS: PRIMARY AND DERIVATIVE. TEMPERAMENT

IT is not unusual to find people speaking and writing of an emotion when they mean some simple feeling, or using the word "feeling" when they should use "emotion". We might begin this chapter, then, by asking, What is an emotion? The answer is that it is more than a simple feeling—like pleasure or displeasure; and we can best think of it as a response (to some stimulus) that is comprised of (A) physical or organic sensations; (B) a definite impulse; and (C) simple feelings.

A. Organic Sensations

It only requires reflection on our part to realise that when some instinct is stimulated there is a definite organic change taking place within us. Accompanying each instinctive response there are corresponding physical changes, and by observing them we are able to tell the kind and strength of the response. A considerable amount of useful work has been done by Pavlov in Russia and by Cannon in America. The former tells us that when a dog is roused by fear or anger the saliva which normally flows at the sight of food is inhibited. A similar observation has been given by Cannon. Certain other physiologists also show the importance of the mental state upon the activity of the gastric juices; and we know from experience that our food is much more digestible and does us more good when we are in a tranquil or happy frame of mind than when we are annoyed or are anxious about something.

An interesting point of debate among psychologists is whether the simple feeling precedes the organic sensations, or whether it succeeds them. One

theory is known as the James-Lange Theory of Emotion. "Emotion is a consequence, not the cause, of the bodily expressions", according to this theory. "Common sense says we lose our fortune, are sorry and weep; we meet a bear, are frightened and run; we are insulted by a rival, are angry and strike . . . the more rational statement is that we feel sorry because we cry, angry because we strike, afraid because we tremble, and not that we cry, strike, or tremble because we are sorry, angry or fearful as the case may be." It is difficult to accept this theory because, as McDougall points out, we know from experience that being angry involves "an impulsive tendency to strike". "Hence the ordinary statement 'I struck because I was angry' is essentially truer, gives a truer explanation of my action, than James's inverted statement 'I am angry because I struck'. For the former statement means that the person whom I struck had so behaved as to provoke in me the impulse of the combative instinct; and to assign an action to the impulse of which it is the outcome and expression, is the only valid proximate explanation of any action." Nevertheless, whether before or after the feelings, the organic change is necessary before the instinct can function. For example, when the fighting or combative instinct is aroused, our physical movements are speeded up, and this is only possible through the rapid activity of the heart and lungs, muscles and brain. The blood must now be directed to these parts of the body. How can this be done? By drawing it away from the digestive and secretory organs and skin through the contraction of their arterioles. Again, the eye needs more light in order that the combatant may see what he is doing, so the eye is dilated.

Every instinctive response does not involve the same degree of muscular activity, or of the necessary physical change. The acquisitive instinct, and the curiosity

instinct, function in a comparatively quiet way, though it must be admitted that even here there are some corresponding physical changes which sustain the instinct. The increased activities of getting and hoarding sustain the acquisitive instinct, the physical act of concentration in learning sustains the curiosity instinct.

B. The Impulse

Now, the impulse to act in an emotional experience is again something of which we are all aware. I do not stop at only feeling angry when my combative instinct is aroused by some bully, or by a report of diabolical persecution among the Jews; I want to do something—strike or restrain the bully, urge the Government to adopt possible steps to save the Jews. A crowd arouses my curiosity. I wonder what is happening and, impelled by the impulse to find out, I proceed to learn the reason for the crowd. Three points, however, should be noted here:

(a) The strength of the impulse to act is determined by the nature of the object stimulating the instinct. For example, the mother is naturally more strongly aroused to anger when she sees somebody attacking her own child than when another child is attacked; and she is much more likely to act in the former than in the latter situation.

(b) The impulse may be inhibited by a conflict between its own corresponding feelings and the opposite feelings; for example, the mother's combative instinct is aroused by the sight of some one bullying her child, but before she can act, her anger (corresponding feeling) conflicts with her fear of the bully (opposite feeling). The impulse is now inhibited, and she finds herself too impotent in the painful situation to do anything.

Here is another illustration of what I mean: the

case of an English officer who in 1917 met one of the enemy. He drew his sword to strike him, whereon the man cried out in English, "For God's sake don't do that!" The impulse to strike was thereupon inhibited by the fear of killing an Englishman.

(c) We are aware of the impulse only when we reflect on our failure to act. If the emotional response of the instinct is complete, then the organic sensations, impulse, and feeling are all part of the mental cycle, which, of course, we remember on reflection. But it would be difficult to analyse introspectively the different modes of that state when it is present. However, should the impulse to act be blocked by conflicting feelings, we have a state of psychical tension of which we become aware, and it is then that the urge to do something forces its presence on our consciousness.

C. Feeling

The simple feeling of the emotional experience gives it tone and colour, and when it is strong it narrows down the field of consciousness in the sense that we neither see nor hear things that are outside the path which leads to the immediate end. For example, the man whose good name is attacked is angry, and he can think of nothing but defending himself. His mind is travelling along the path that leads to the destruction of his enemies. If he is at the dinner-table and in conversation with his friends when the attack is made, he loses all interest in the dinner and ceases to hear what is being said except that which is relevant to the end now in his mind. Again, the mother who sees her child in danger of being run over dashes into the road to save him without any thought of herself. The strong parental feeling narrows down consciousness, and all she can see is the path that leads from herself to the endangered

child. She cannot even hear an approaching bus coming from the opposite direction. The field of consciousness narrowed in this way, the impulse is free to act; but, as already pointed out, if there should come into the field any conflict, then the impulse is likely to be inhibited.

For each instinct there is a corresponding feeling or feelings. A simple table will make clear what is meant. Let us take McDougall's list of fourteen instincts, which we used in Chapter IV, and now attach the accompanying feelings (though he incorrectly speaks of them as emotions, which we have defined as more than feeling).

Names of Instincts.

1. Instinct of escape (of self-preservation, of avoidance, danger instinct).
2. Instinct of combat (aggression, pugnacity).
3. Repulsion (repugnance).
4. Parental (protective).
5. Appeal.
6. Pairing (mating, reproduction, sexual).
7. Curiosity (inquiry, discovery, investigation).
8. Submission (self-abasement).
9. Assertion (self-display).
10. Social or gregarious instinct.
11. Food-seeking (hunting).

Accompanying Feelings.

1. Instinct of escape (of self-preservation, of avoidance, danger instinct).	Fear (terror, fright, alarm, trepidation).
2. Instinct of combat (aggression, pugnacity).	Anger (rage, fury, annoyance, irritation, displeasure).
3. Repulsion (repugnance).	Disgust (nausea, loathing, repugnance).
4. Parental (protective).	Tender feeling (love, tenderness).
5. Appeal.	Distress (feeling of helplessness).
6. Pairing (mating, reproduction, sexual).	Lust (sexual feeling or excitement).
7. Curiosity (inquiry, discovery, investigation).	Curiosity (feeling of mystery, of strangeness, of the unknown, wonder).
8. Submission (self-abasement).	Feeling of subjection (of inferiority, of devotion, of humility, of attachment, of submission, negative self-feeling).
9. Assertion (self-display).	Elation (feeling of superiority, of masterfulness, of pride, of domination, positive self-feeling).
10. Social or gregarious instinct.	Feeling of loneliness, of isolation, nostalgia.
11. Food-seeking (hunting).	Appetite or craving in narrower sense (gusto).

<i>Names of Instincts.</i>	<i>Accompanying Feelings.</i>
12. Acquisition (hoarding instinct).	Feeling of ownership, of possession (protective feeling).
13. Construction.	Feeling of creativeness, of making, of productivity.
14. Laughter.	Amusement (jollity, carelessness, relaxation).

There may be more than one primary feeling present as a result of the same object rousing more than one instinct. Suppose you are alone in the house, reading a book. Suddenly you hear a strange noise in the adjoining room, which makes you put down the book because fear is present and also wonder. These opposite feelings create a state of mental tension. On the one hand you are afraid to leave the present room, and on the other you are curious to find out what caused the noise. For a time you are unable to decide what to do, so you suspend all activity, until one or the other feeling subsides. Let us take anger and helplessness, as when you miss your last bus. You feel angry with the crowd for pushing you away, and at the same time helpless to do anything. Fear and pleasure may be present when you are asked to address a public meeting—fear of letting yourself down, pleasure at being recognised as a public speaker.

When, however, two instincts aroused by the same object co-operate, you get a blending of the corresponding feelings. A good illustration of this is when the combat and repugnance tendencies are aroused simultaneously by the sight of a bully striking his dog. Anger and disgust rise up within us and produce the blended feeling of scorn. McDougall gives us a number of similar blended feelings. Contempt is a mixture of anger (pugnacity), disgust (repulsion), and positive self-feeling (assertion). Admiration comes from a blending of wonder (curiosity) and negative self-feeling (submission). Awe is admiration plus fear. I admire a man who is an object of wonder and negative self-feeling, but his powers arouse my fear of

him. So I am left awe-stricken before him. Gratitude is the tender or kindly feeling mingled with the negative self-feeling. The generous act of a friend arouses the kindly feeling of the recipient, but the latter is moved to negative self-feeling by the ability of the friend to do what he himself cannot.

The primary feelings are common to both man and beast, but not the blended. In addition to these there are the derived feelings, which are experienced by man only, and presuppose a comparatively high level of intelligence. McDougall says there are four differences between the primary and the derived feelings. (Again he insists on calling them emotions, because "the usage is now too firmly established in common speech".)

1. The primary feelings are the result of the instinctive response to "some given object or situation", and not to "any impulse already operative". The derived feelings issue from some desire or aversion, which is itself the result of some present impulse linking up with an image. For example, a man feels hungry; the impulse is to go in search of food. The search is linked up with the image of a restaurant, and so he is confident or hopeful of finding a decent meal. (Confidence and hope are the positive derived feelings.) But if the impulse is linked up with an image of the only available eating-place being thoroughly blitzed, then his derived feelings are negative despondency and despair.

2. The primary feelings correspond to the instinctive disposition, the derived do not. They arise when the instinctive response is in process, as, for instance, in the man whose impulse to find food is actually operating; he feels either confidence or despondency, hope or despair.

3. The primary feelings are dynamic; anger is a force compelling us to act in some other way, if we cannot strike. But the derived "are merely inci-

dents", and have no compelling influence on our behaviour. (Hope would appear to be an exception to this, if there is any truth in Wordsworth's words, "We live by admiration, hope, and love". But McDougall objects to the personification of the feelings in this way by the poets.)

4. The primary feelings can be organised by the sentiments (which will be defined in Chapter VIII). For example, love of country is a sentiment which employs and co-ordinates the instinctive feelings; and this can be done only because they are a permanent part of the mind. The derived feelings are incidental and transient, and therefore cannot be organised.

In his classification of the derived feelings McDougall places five in what he calls prospective feelings of desire: confidence, hope, anxiety, despondency, and despair, and these are graded from the positive to the negative, with anxiety as the transitional element. He also places three in the class called retrospective feelings of desire: regret, remorse, and sorrow. Again, they are degrees of negative feeling. We regret a mistake made, we feel remorse because the mistake was deliberately made, we experience sorrow because the mistake has not only let ourselves down, but others also. Sorrow is negative feeling plus the tender feeling of the parental instinct.

McDougall includes joy without classification as a derived feeling, but couples it up with sorrow, as though they were the positive and negative response to some desire fulfilled or unfulfilled. But there is a reason for questioning his point of view here. The primary feelings have a bipolar character. When the instinct reaches its fulfilment you have satisfaction or pleasure, when frustrated dissatisfaction or displeasure. When satisfaction is keenly felt you have joy, like the joy of having escaped, the joy of combat; and sorrow is correspondingly the opposite feeling-state. Joy overflows into laughter, and sorrow into tears.

To sum up, then, the emotion is more than feeling. It is made up of physical sensations or organic tone, the impulse to act or conative expression, and feeling or affective tone. The primary feelings are those which correspond to the instinctive tendencies, and are present when the instinctive response is made to an object or situation. The blended feelings are a combination of two or more primary feelings stimulated simultaneously. Derived feelings arise after the instinct is stimulated, and the impulse links up with some positive or negative image.

Temperament

Closely allied with the subject of the emotions is that of the temperament, because it is the now accepted belief that the kind of temperament an individual has is determined by his inherited affective nature, and by the inter-relation of the affective inheritance with his environment. In the fifth century B.C. the learned physician Hippocrates stated that the human body was composed of air, water, fire, and earth, and that these four elements corresponded to the elements blood, phlegm, yellow, and black bile found in the body. But it was Galen, the Greek physician in the second century A.D., who used this idea as a basis for classifying the different types of individuals. The unequal mixture of the elements with a predominance of one gives us the clue as to why men are unlike each other in temperament. Those with a predominance of blood were sanguine—the hopeful type: those with yellow bile were choleric—the emotionally unstable type; those with black bile were melancholic—the gloomy type; and those with phlegm were phlegmatic—the slow, passive, inactive type. William James uses a different classification when he speaks of the tough-minded and the tender-minded types. But by temperament we mean

more than just a characteristic mood such as Galen's classification suggests. We need to take into consideration (a) the frequency and changes in the emotions of the individual; (b) his emotional stability; (c) range; and (d) strength. The first applies to some who swing from depression to elation for no apparent reason; the second to those who maintain a balance in most situations, though of course one can never tell absolutely whether an emotionally stable person will stand up to every crisis without losing control of his feelings and impulses and breaking down physically; the third is decided by the sensitivity of the individual. Some people respond to a greater number of emotional situations than others; that is, they have a greater emotional range. But finally, whilst some have emotional breadth, they may lack in emotional strength. Some feel intensely and do not find it easy to get over their feelings. Whatever classification of temperamental types we examine we find that, apart from the characteristic mood, sanguine, choleric, phlegmatic, or melancholic, there are also present in varying degrees emotional frequency and change, stability, breadth, and depth.

We need to remember, of course, that these different labels are only guides in understanding why men and women behave so differently in their emotional responses; frequently the admixture of these same qualities makes it difficult to be exact in summing up an individual's temperament. This is true of Jung's terms "Extravert" and "Introvert". Here are two types very different from each other; but whilst you may observe a predominance of extraversion or introversion in one person, in another you can see such a degree of both that you are at a loss to know whether he is an extravert or an introvert. Let us look at the different characteristics; and we will set them out in tabular form, so that they can be more easily compared.

Extravert.

- A. Interests are objective—*i.e.*, external.
- B. Behaviour is influenced primarily by necessity and expediency.
- C. Attitude to strangers is robust, hearty, "hail-fellow-well-met".
- D. Tends to under-estimate the difficulties of problems and new situations.
- E. Careless about personal appearance and neglectful of detail.
- F. Over-compensates for the "inferiority" feelings or complex.

Introvert.

- A. Interests are subjective—*i.e.*, personal.
- B. Behaviour is influenced by moral ideals and principles.
- C. Attitude to strangers is cautious and reserved.
- D. Tends to over-estimate life's difficulties.
- E. Particular about personal appearance and precise about details.
- F. The "inferiority" is revealed through phantasy and seclusion.

It would appear, then, that a careful study of a group of men and women with the above table before us would enable us to say what each is like in temperament, and what their particular attitude is towards themselves, towards others, and the whole of their environment. That, of course, does not mean that, knowing people in this way, we can predict precisely how they will behave in any given situation. For example, the extravert may panic one day in an air-raid, but in another he may show remarkable bravery. The introvert may at one time be cautious of strangers, at another he will approach them if he wants to know urgently the time of a bus or train. In considering temperamental types, therefore, we do need to keep before us two facts:

A. Seldom if ever do we find a 100 per cent. one type. Each individual is a mixture of both extravert and introvert, sometimes with a predominance of one over the other.

B. Knowing the type of an individual does not mean that we can predict his behaviour in every given situa-

tion. We have an idea of what he may do, but his freedom of choice may prove us to be wrong.

We can proceed from the two-type theory to that of a three-type. In Chapter VI we saw that in every conscious experience there are three factors involved—the cognitive, affective, conative. These may be used as terms for describing different kinds of personalities. The cognitive corresponds to the thinking type; here the individual does a great deal of reading and reflection; he is unwilling to act unless he can first give an intelligent reason, in argument he is logical in intention, his general interest is in theories rather than their application, and his general response to objects and situations is thoughtful rather than emotional.

The affective type responds with feeling to his environment. He is less able to estimate the objective value of things, because he is more concerned with his feeling reactions to them, and more occupied with projecting his feeling to them than with seeing them in any detached way. His interest in a theory is not whether it is logical and reasonable, but whether it gives satisfaction or dissatisfaction, whether it offers pleasure or displeasure.

The conative type has its interest in the practical. Such a person is not greatly troubled about proving the validity of a theory, he does not stop to estimate the pleasure or displeasure it may give him, he wants to know whether it can be applied with good sound practical results. Both at his work and in his leisure time he prefers to be doing something of an active and creative nature, whilst his interests generally have a pragmatic or practical feature. The difference between the affective and conative types may be shown by the following illustration. Two children sat at the breakfast-table with their parents. The father complained of a severe pain, whereupon the affective child showed a strong feeling response by being greatly troubled, even to the point of tears in her eyes; the

other little girl, equally concerned, remarked to her mother, "Why don't you send for the doctor?" Had a third and older child of the thinking type been present, he might have wanted to know what was causing the father's pain.

Jung, to whom we owe the terms "extravert" and "introvert", writes not only of the "thinking" and "feeling" types, two of the above three, but also of the "intuitive" and of the "sensation" types. Belonging to the "intuitive" type are prophets and seers, and all who are capable of forecasting probable future events and happenings. The "sensation" type is concerned with pure pleasure and pain. To these four types he gives the name "function types", and these are based on the different modes of human expression. He links them up with the terms extravert and introvert, so that in fact you have not four functional types, but eight. For example, the "extraverted thinking type" concerns itself with facts and how to classify them; the "introverted thinking type" with theories and their construction. The "extraverted feeling type" desires harmony between himself and the outer world. The "introverted feeling type" desires harmony within himself.

The "extraverted intuitive type" prophesies (rightly or wrongly) what is likely to happen outside himself. This type is generally speculative and gambles. He is out for gain, and his intuition leads him to believe that there are chances of gain where they do not really exist. Much of his life seems to be based on wishful thinking; this is why he often makes mistakes. His judgment may be useful in emergency, but he is not to be depended on where long-term policies are concerned, because of his unreliability. The "introverted intuitive type" prophesies what is likely to happen to himself. He spends much time reading between the lines, but his judgment of what is likely to take place in the future is based, not on objective

facts, but on what is projected from his unconscious on to the external world.

The "extraverted sensation type" wants to be interested by others because he has little self-resourcefulness. In fact his life depends on what the world can do for him; left to himself he is bored and miserable. He is a good judge of what can give most sensory pleasure, but poor in estimating the real needs of others. The "introverted sensation type" has a more calculated taste for pleasure, be it material or æsthetic. He does not reveal his responses as the extravert does; they are hidden, though containing smugness and conceit. Sometimes he shows uneasiness in the midst of sensation because he is afraid of what the experience may mean to him.

The task of deciding to what type people belong becomes increasingly difficult as we move from the two to the three, then to four, and finally to eight types. It may be asked: What is the advantage of knowing these different temperament types? Are the terms extravert and introvert, etc., just labels with little or no practical significance? The answer is No, and for two reasons:

A. It helps the individual in his daily adjustment if he knows the type to which he belongs. If he is of the extraverted feeling type he will recognise why he is ready to accept and admire the things his friends do—he wants to be in harmony with them. This is sometimes inadvisable, and he therefore needs to exercise caution and criticism, bringing reason to distinguish between what is good or bad, what is true or false. If, on the other hand, he is an introverted thinker, he will understand why he tends to adopt a detached intellectual attitude towards ideas and theories which are of little practical value unless they can be applied to his life and to that of his community. Intellectual aloofness destroys friendship and may lead to isolationism, which is good for neither man nor beast.

By reflecting on his type the individual can therefore correct an over-emphasis on the intellectual side, and restore the balance between all the factors of his personality. Further, by knowing one's self in this way one can avoid situations, like the choice of a profession or trade, in which one is likely to prove a misfit.

B. A knowledge of the different human types will help in understanding others, and in avoiding the snag of employing the wrong person for a particular piece of work. It is easy to be impatient with people who do not behave as we do. The feeling type responds with merriment to an Allied victory, with depression to defeat; the thinking type prefers to cogitate on what either means to the final outcome of the war. In a community both responses are good, because they produce a necessary balance between over-optimism and devastating despair. But it would be bad for the community if either type was critical of and impatient with the other. Again, as industrial psychologists know, the type of personality must be taken into consideration when placing employees in a factory or warehouse. The extravert is a better advertiser than the introvert, but the latter is better as a craftsman than the former.

To sum up: The emotions form the basis of the human temperament, and for some reason, yet to be explained, they account for the different temperamental types. The two general types are extravert and introvert, but these may be subdivided into the cognitive, affective, and conative types; or, as Jung says, thinking, feeling, sensation, and intuition. Few, if any, individuals are 100 per cent. of any one type, most are a mixture of the extravert and introvert, of the thinking, feeling, intuition, and sensation types, with one or the other predominating to such a degree that it would be possible to tell to which type the person belongs. Though it is almost impossible to

place some individuals in any one class, because they are so well-balanced. But this does not mean that, because an individual appears to have an equal amount of all types in his make-up, he is bound to be a well-balanced personality. Such a personality depends not only on his "temperament type or types", but also on his whole mental development—on the sentiments and their harmony, the dispositions and their harmony with the sentiments, on the mental mechanisms or psychological patterns, with full scope for the compensations of the complexes.

But to return—a study of the different types enables us to understand not only others, but ourselves. To know one's self is the greatest of all human achievements. It is the primary condition of being true to one's self. Socrates—the ancient philosopher—bade his disciples do this; but we have an advantage over them, in so far as modern psychology offers us considerable help.

CHAPTER VIII

SENTIMENTS, DISPOSITIONS, COMPLEXES

SHAND, in his book "The Foundations of Character", says: "In the growth of character the sentiments tend with increasing success to control the emotions and impulses; in the decline of character the emotions and impulses tend with increasing power to achieve their freedom." These words are important, because they are intended to emphasise two things: (a) The necessity for controlling the emotions; (b) the place of the sentiments in character formation.

(a) Control of the emotions is absolutely essential for strength of character. It has already been pointed out that the emotions are the real drive of the instincts, and that they in themselves are an integral part of our mental make-up. The unemotional person is seldom, if ever, impressive; he may be intellectually brilliant, but his power of imparting knowledge to others is very limited. Even if he writes his thoughts, which may be quite logical and in correct sequence, they fail to grip us, and this is partly because they are presented without urgency, drive, and attractiveness. Even objective or scientific facts can be illumined by the character of the writer. This can be confirmed by the study of different text-books on the same subject; one catches the eye of the student, the other bores him. Again, the emotions enliven the personality, give forcefulness to the speaker, deepen his feeling responses to others, and increase his appeal to their minds. But it is on the measure of their control that the strength of the individual character depends. The man of strong character doesn't panic in the face of danger, he doesn't rage when frustrated, he maintains a steady emotional response to humour and sorrow, and harnesses his feelings to his thoughts.

Should he lose his control he becomes hysterical in those situations which stimulate his feelings and impulses, he is swept aside by his temptations, he raves in argument, flees when afraid, shrieks in humour, bellows in sorrow, and his thoughts become the slaves of his feelings. Since, then, the strength of character is measured by the control of the emotions, how is this to be achieved?

(b) This brings us naturally to the consideration of the sentiments, which, as Shand points out, are the controlling factors of the emotions and impulses. What, then, is a sentiment? It is much more than an idea of some object, because around it constellate the emotions appropriate to it; for example, let us examine the sentiment patriotism. The idea that lies at the centre of this sentiment contains all that our country means to us—its freedom, its security, its prosperity, its authority, its culture, its beauty, and its friendliness. Around the idea constellate the emotions attachment, devotion, fear—of being separated from her, anger—when she is attacked or criticised. Similarly, friends, school, Church, society, are among the objects about which we form sentiments.

Sentiments

Let us look at the two primary and outstanding sentiments that organise and control our emotions: love and hate. Love—here the idea corresponds to some concrete object, such as the self, mother, father, friend, dog, etc., or to some abstract quality such as beauty, goodness, truth, justice, peace. The emotions are all sympathetic to the idea which is central in each case. They are fear, anger, joy, and sorrow. When the object is in danger, fear is promptly experienced; if it is attacked, then anger is felt. When it is present, joy prevails, and when absent, sorrow predominates. Here we can see how the emotions are directed towards

the object; but where hatred is concerned they are directed otherwise. Instead of being sympathetic to the object, they are antipathetic. Joy is felt in the absence of the object, sorrow in its presence, fear and anger lest it may attack. The central idea corresponds to the object, which may be either concrete or abstract. For example, love of one's country is concrete in the sense of its geographical nature, and abstract in the sense of its democratic nature.

Now, these sentiments are not the result of any one deliberate judgment on our part, but of our continual contact with the object of which we gradually form an idea. The mother-sentiment, for example, is the product of a relationship which began in early infancy, and which the later years have firmly established. The child sooner or later comes to realise that the mother is indispensable to him for his physical and emotional needs, and as he grows up he learns to appreciate her kindness, her wise counsel, and self-sacrifice—in a word, for her own sake. As long as the relationship between them remains happy, so the sentiment grows stronger. Again, one's love for one's country is the outcome of a life lived in her borders, along with the gradual but increased realisation of what she means to one.

The sentiment that plays the biggest part in our mental activities is the ego-sentiment; our behaviour is very considerably influenced by what we think of ourselves. The child who grows up believing that he is important and indispensable is likely to behave in this way. It is a truism that the individual lives more with himself than with anyone else. He is for that reason thinking more of himself than of anyone else, and his estimate of himself fluctuates according to his experiences; but this means that the idea of himself is amended from time to time. The central core or beginning of the idea, however, is primarily formed in early childhood, before the age of seven; his later

experiences are largely influenced by what he thinks of himself before then, and his reflection upon these experiences either strengthens or weakens the ego-idea. If he believes he is courageous before danger he will readily face dangerous situations, and even if he feels afraid he will hurriedly dismiss these feelings as untrue of himself; if just, then he will endeavour to act justly, because to be other would conflict with his ego-sentiment and make him unhappy. The reason why some men fail to forgive themselves for some mistake or immoral action is due to the conflict between the sentiment and the fact of having done wrong. In a sense they suffer from a wounded pride, which is due to a morbidly exaggerated ego-sentiment. Some individuals have what is called a perfection-phantasy; that is, they think that they cannot make a mistake in whatever they do or say, and if perchance they do make a mistake they are mortally humiliated. The phantasy is an element of their ego-sentiment, which in turn influences their private and public conduct. A person so influenced will do nothing unless he can first satisfy himself that his action will be beyond criticism, and when criticised he reacts badly. It is true to say, then, that the pivot around which all the other sentiments revolve is the ego-sentiment, unless it is superseded by the religious sentiment which is God-centred.

Dispositions

The disposition differs from the sentiment in so far as it is unconsciously accepted from other people. For example, the parents of a child may have as their political sentiment "Conservatism". (This for the sake of clarification.) The child, without wishing to reason about what they think, accepts uncritically their political beliefs, and in his mind there is eventually formed a "Conservative" disposition. Again, if the

parents have a strong "Church" sentiment, they naturally discuss together matters that are relative to their Church interests and activities, and the child, hearing their discussions, absorbs what is said and unconsciously forms a corresponding disposition. This, incidentally, is the reason why there are many passive church-goers who are neither active nor reliable in the religious life. Numerous other examples might be given, but they would all make clear that the disposition is different from the sentiment for the reason already stated. Our psychological dispositions make us favourably inclined towards an object, but our acceptance of it depends on our sentiments; for example, an "anti-vivisection" disposition will make a child kindly disposed towards animals, never wishing to cause them pain; but it is only when he has the sentiment that he will do something to prevent others from causing them pain.

It is at this point that we can see the importance of implanting in the child's mind those dispositions which will influence the trend of his character, and this can be done by unobtrusively discussing interests and by behaving accordingly in his presence. The cardinal virtues of honesty, truth, goodness, and justice must form part of his moral environment, particularly in the home. Their conative expressions he will come to accept, and eventually their dispositional influence will be seen in his own conduct. The same applies to other helpful dispositions. But this does not mean that he will not be able to accept later on sentiments which may conflict with those held by his parents, providing, of course, he has not been compelled to think and act as they did. It must be remembered that the disposition means an inclination towards an object, not an acceptance of it; and as long as the child is free to think for himself, as he grows older he will reason whether or not he should continue to think and act in the way he did in his

youth. Reason may urge him to set aside his parents' beliefs, and if his dispositional behaviour was not motivated by fear, he chooses other beliefs. Again, illustrations of this point are numerous and can be seen in the way young people join some political party opposed to that of their parents, or leave one religious persuasion for another because it is more representative of their beliefs. That there is some measure of mental conflict present when the disposition is forsaken for a new sentiment, none will deny. But two things need to be said here: (a) the conflict is at its minimum force when fear is absent; (b) the conflict can be resolved in the light of reason. If then the individual is free to choose, he will follow the dictates of his reasoning, and in time his own personal sentiments will influence him in different directions.

Thus far we have seen that the sentiments are consciously acquired ideas around which constellate relevant emotions. The sentiment that dominates and co-ordinates all others is the ego-sentiment, which functions like the sun in its influence upon all the planets. And the individual's emotional stability and character are measured by the strength and co-ordination of his sentiments. The dispositions are the unwittingly accepted sentiments of others; they exercise an unconscious influence which inclines the individual towards certain ends or objects, but which may be neutralised by opposing sentiments.

Complexes

The complexes are different from the dispositions and the sentiments in so far as the affective elements are of a painful nature. But the word complex is used in a double sense—broad and narrow. In the broad sense it means the result of a violent or painful emotional experience, the emotions of which are afterwards aroused by associated objects or situations.

For example, a child frightened by a dog is likely to have a complex where all dogs are concerned, or where other objects associated with the fright are involved, such as the place where the fright was experienced. A boy thrashed by a man wearing a red tie has a complex not only of the man and his particular type, but also of red ties, because the painful affect radiates to things associated with the man himself. As long as the complex operates only on the perceptual level it can do no serious harm, and here quite often it can be resolved; that is, the object can be detached from the affective experience, as, for instance, through reconciliation. The harm comes when the complex extends to the ideational and conceptual levels. Supposing the man with a red tie were a schoolmaster, the influence of the complex would extend to images of other schoolmasters who in some way resembled the former. Similarly, it may be extended to the idea "schoolmaster", or even to "school". When this happens the complex becomes a handicap.

In the narrower sense of the word, the complex means the repressed elements of some painful experience due to an unresolved conflict brought about by the presence of two strongly antagonistic tendencies aroused by the same object. For example, a soldier at the front in 1917 was on sentry duty when the Germans put down a box barrage around him. The tendency to flee for safety was strongly aroused, but this came into conflict with the social tendency involving devotion to duty. The fight within his mind between these two opposing tendencies produced a complex which was promptly repressed as soon as the barrage ended. Here is another example. A girl at home is annoyed by her brother. Her aggressive tendency is immediately stimulated, and she feels the urge to react with stinging words and physical violence; but the sight of her brother suffering with a broken arm also arouses the protective tendency (*i.e.*, the

parental tendency). The mental conflict results in the repression of the painful elements, which means that rather than let her recognise the desire to inflict punishment on her suffering brother her mind banishes it from the conscious level. These repressed elements influence the conscious life in a characteristic though disguised way. Sometimes the behaviour, and sometimes the dreams, are coloured and even determined by them. The soldier's behaviour was influenced by his forgotten painful experience in this way. Some years afterwards when he came up against a situation which distressed him, and to which he could not adjust himself, he ran away from it. On one occasion the thought of going to work distressed him, and instead of taking the bus to it he quite impulsively took one that went in the opposite direction. The girl who wanted to retaliate with violence to the provocation of her brother, later dreamed that she was on a golf course carrying her "driver", and came across a rabbit which looked at her pitifully. She raised the driver and dealt the helpless animal a slashing blow. These repressed complexes are pathological in nature, and they need to be recalled before the personality is free of their influences.

The Inferiority Complex

Now, the complex about which we hear and read a great deal is the Inferiority Complex, which must be distinguished from the inferiority feeling. The latter is conscious, the former is unconscious. There is nothing unhealthy about an inferiority feeling; in fact it can be useful to us in the sense that it urges us to acquire greater ability. In certain respects men and women are comparatively superior to one another in some things, in others they are more or less equal, and also inferior in other ways. A doctor is superior

to a lawyer in medical knowledge, they are perhaps equal in politics, but in law he is the lawyer's inferior. The man who feels inferior to his opponent will, if he really desires to compete with him, acquire greater knowledge or skill. On the other hand, should he feel that nothing he can do will make him equal with his opponent, he will, if he adopts a correct attitude, recognise his inferiority and be content to accept the resultant situation.

But the inferiority complex produces behaviour manifestations that cannot be controlled or even recognised in this way. The individual so troubled may behave as though he were superior to every one else, or as one who is seeking to buy the affection, the attention, and the praise of others, or as one who completely withdraws from society. In psychological terms, the inferiority complex is an accumulative effect of repressed painful elements associated with the self or ego. These elements are parts of previous experiences, and when repressed they appear to gravitate towards a common field of the unconscious, where they form a system all on their own. The experiences begin in early childhood, and by the time the child reaches adolescence and adulthood their painful effect is not easily recognised.

Causes of the Inferiority Complex

Let us now proceed to examine some of the causes of the inferiority complex, and some of its manifestations. In the young child there is a fundamental striving to live, and to do that he must needs assert himself; but his striving may be handicapped by some physical defect, in which case he will at times feel thwarted, particularly when he competes with others. A weak, under-sized child will desire to do the things a stronger one can do more easily, and when he fails he acquires an inferiority complex which grows stronger

with repeated experiences of his physical inability to do what his companions can do. This inability may arise from some organic defect which precludes the child from living a normal life and prevents him from achieving the things he desires. The distressing awareness of his failure also produces those painful elements which form the true basis of every inferiority complex.

The more strictly psychological causes for his inferiority complex are:

1. A wrong comparison made by parents and others between the child and his brothers and sisters, or between him and other children outside the home. It is not easy for a young child to adjust himself to the new baby. He feels displaced by this intruder upon his mother's affection and time, and if perchance he feels neglected he will also suspect his prestige to be lessened. To combat this feeling the parents must in some way make it up to him. But should they draw unfavourable comparisons between him and the baby, then his suspicions are confirmed, and in some way he will try to regain his lost position. Again, should the child when he is older be unfavourably compared with other children in one way or another, he will have a sense of personal devaluation, which is always an acute, painful element in his experience.

2. Forbidden self-display. Every child passes through a phase of displaying what he can do. It may take the form of excessive talkativeness, persistent acrobatic feats with the furniture, or, in the case of a girl, dancing before an audience. Self-display is a form of self-expression in which the child must not be discouraged. On the other hand, it is unwise to encourage it. If discouraged, the child will feel unwanted, and this is a serious contribution to the inferiority complex. Much better, then, to ignore his self-display, or to tolerate it, until he passes through this phase.

3. The refusal on the part of parents to recognise the child's right to express himself. There are times when the child wants to indicate what he feels about his parents and others, also about the things in which he is interested. When he speaks he expects to be heard, and to be understood. To refuse him this right is to leave him helpless, and in a real sense it is a violation of his personality, making him feel that he does not count for much. The correct attitude is to listen to what he has to say, and to show an appreciation of his point of view.

4. Success in the early years followed by repeated failures. When the child achieves success he forms an exaggerated estimate of his ability. In effect he believes that nothing can stand in his way to further success. But when this does not happen he fails to see that his new tasks call for an increased effort. He feels that there is something wrong with himself, and this may inhibit further striving. This can be avoided through wise encouragement which will help him to see that his new tasks can be accomplished if he works.

5. Too high a standard set before the child. It sometimes happens that parents and teachers are too ambitious for the child. They try to persuade him to reach goals that are, for the time being, beyond his grasp. He feels that he ought to win the prize, and when he is unsuccessful he is dogged by failure and by the feeling of not-worthwhileness. This mistake can be avoided if due regard is paid to the child's intelligence quotient, and also to his physical stamina. The first can be done by submitting the child to an intelligence test, and the second is often a matter of discreet observation.

Manifestations of the Inferiority Complex

According to Adler, the founder of Individual

Psychology, the complex gives rise to forms of "over-compensation" of which the individual is unaware. It is true that we compensate for our feelings of inferiority. The man who feels unequal to his neighbour in growing roses will compensate by growing sweet peas. He knows why he is doing this. But the "over-compensation" of the complex would escape his notice. The child who feels displaced by the young brother or sister may over-compensate by doing things precisely and quickly to attract the attention and admiration of others; and this becomes a pattern for all future behaviour, so that when he grows older his work is always performed with precision and speed. His over-compensation may take the form of boasting about what he has done and what he is going to achieve, and after he has received attention and some satisfaction, his boasting subsides and all further effort for success disappears. Again, he may not only boast, but also be aggressive, which can be expressed through both the physical and the mental. As a child he may be a young pugilist, and as an adult argumentative, intrusive, lacking in sensibility, and bellicose in conversation. A more refined manifestation of the complex is excessive ambition, an irresistible urge to be at the very top of things—at school, university, in business, societies, etc. The individual may not know what to do when he reaches the coveted height of fame, but the fact of having got there offers him some satisfaction for his "inferiority".

The manifestations which have just been mentioned are neither anti-social nor neurotic. In many ways they are of value and contribute to the life of the society as well as to the satisfaction of the individual. For example, the ambitious scientist, over-compensating for his "inferiority" with precise and speedy work, will, through his research experiments, eventually help on the life of his society. But should the over-compensation itself be thwarted, the individual may

resort to anti-social or neurotic behaviour, both of which are symptoms of an unhealthy mind. The young delinquent (if he is neither an incipient psychotic nor mentally deficient) commits offences because he is either trying to win back what he has lost (his prestige), or to prove his superiority among others. He steals to buy the affection of his pals, or to supplement some felt deficiency, such as the absence of parental love. To cover up his theft when suspected, he is compelled to lie. Had he been able to over-compensate in a more normal way by giving away what was really his own, he would then have been regarded as generous and not anti-social, and because there was no need to tell lies about his generosity, he would have been thought truthful. But because he has not the opportunity to over-compensate in this acceptable way, he resorts to anti-social behaviour. If he doesn't steal he may fabricate; that is, tell fantastic stories about himself which will command the attention of his listeners. These stories he will come to believe in as though they were true, and it is easy to see then how he passes over into a world of complete phantasy.

When the comparatively normal over-compensations for the inferiority fail in their purpose you have a failure to adjust the self to the given situation. This failure throws the individual back in upon himself, and from the felt humiliation he either emerges with compulsions, physical illnesses, and even delusions, or is in a sense submerged in depression, anxiety, and seclusiveness. The former symptoms are typical of the extravert—the person who lives outside himself; and the latter of the introvert—the person who lives inside himself.

Here is a typical case of the compulsion. A young man is obsessed with attending to the details of words and figures. He feels a compulsion to use a word only in its precise meaning, and never to disregard the

decimal point of a figure, however small it may be, in drawing up averages and statistics. This compulsion is a way of making him feel important during an illness which was precipitated by a fear of failure. As a boy he was greatly discouraged by his father, and wrongly compared with his younger brother. The painful elements of his different ego experiences were repressed at an early age, and by the time he reached adolescence the inferiority complex was well in command of his life. It influenced his academic life both in the measure of his studies and in his examination fears, which got out of his control when he was about to sit for his finals. The escape from the risk of failure was through a neurotic illness with its symptoms of paralysis and compulsions. The hysterical person dogged by an inferiority quickly escapes from an unadjustable situation through a functional illness, but the illness is a form of tyranny compelling others to give him or her affection and attention; that is, to give what he would have ordinarily merited had he not been inferior.

In extreme cases the delusional individual (paranoiac) has grandiose delusions, or delusions of persecution; the one is a fantastic over-compensation, like that of the poor char-woman who believes that she is the rightful queen of England; the other is equally fantastic as a defence of failure, like that of the business man who, outwitted by his competitors, believes that he is the victim of jealousy and persecution.

The introvert, on failing, with his over-compensation, to face life, falls back in upon himself and draws down the shutters of depression, anxiety, and isolation. His depression is like a black room in which he is unable to move. He cannot move out of it because his inferiority has lost its *via media* now rejected by the external world, and there is no purpose in moving

within the dark room itself, so he "stays put". But he may be free enough to know that he should go back to life, though he doesn't know how, because he has no way of compensating himself for the inferiority. So his anxiety protects him and excuses him from further efforts to get on with life which does not understand him. Indeed, he may retreat into a world of childhood phantasy, refusing to come into contact with reality, since it is much too unkind towards him. He resents derogatory criticism, and mistrusts the evaluation people put on his work. In fact, he misinterprets remarks as though they were directed against him. He must get away from the people who are incapable of appreciating his abilities, and so when out walking he avoids them by crossing the street, and on no account will he go into groups. The further he goes into his reclusiveness the more he lives in phantasy and the less accessible does his personality become.

Now, it follows that the inferiority complex, which I have described as an unconscious accumulative effect of painful experiences associated with the ego and beginning in early childhood, may be differently caused in different individuals, so that we can never say that the complex in a particular person's case is caused by this or that painful experience; only an analysis could reveal the causal agencies. In trying to understand the complex, two things should always be considered: (a) the sensitivity of the individual; (b) the condition or nature of his environment. His inferiority is the resultant of their interaction. Again, different people compensate for the inferiority in different ways. Much depends on whether they are extraverts or introverts. As long as their overcompensations are accepted by society and continue to give satisfaction to themselves, so they will live normally and make useful, if not valuable, contribution to their communities. But once they fail to

compensate for their inferiority they will fall back upon forms of behaviour that may be either anti-social or neurotic. The delinquent adopts the former; the mentally ill person adopts the latter, and his illness protects him against a misunderstanding society.

CHAPTER IX

DREAMS AND THEIR PURPOSE

You will perhaps remember that in a previous chapter it was affirmed that there is constant activity going on in the unconscious mind, in as much as the buried complexes, that is, the forgotten and repressed painful experiences, are always striving to enter the conscious mind and require a continual restraint. Freud, to whom we owe most of our knowledge about dreams and dream technique, says in his book on dreams ("The Interpretation of Dreams") that the unfulfilled and repressed wishes in the unconscious mind attain a certain measure of satisfaction through the dream. If I were asked to define the word "dream", I should say that a dream is a mental "play" illustrating part of the sleeper's unconscious life. The ancient Jews believed that the man who did not dream was a very bad man; there was something wrong with the soul which could not express itself while the body and mind slept, because it was through the dream that God spoke to man. Today we know that all people must dream, but that some fail to recall their dreams in their waking state. To prove to a man that he dreams, even though he has no remembrance of doing so, I have sometimes endeavoured to recall his dreams by means of hypnosis. Under deep hypnosis this is possible. For instance, a man came to me for treatment, and knowing the importance and usefulness of dreams for analytical purposes, I asked him if he could remember any of his dreams. He replied, "Oh, I don't dream." I suggested hypnotic treatment, which suggestion he accepted. He was duly put into a deep hypnotic sleep, during which he re-lived the happenings of the night before, going to bed, putting the light out, and falling asleep. I told him he would dream

again some of the dreams he had had the night before, and that on awaking he would tell them to me. This he did, and he was then convinced that he really did dream, but had previously been unable to remember anything about his dream experiences. I find also that when I perform a surface analysis for a patient, dreams are much more easily remembered after the analysis than before. Often, if there were no remembrance before, not even the very slightest vestige of it, the process of analysis somehow renders recollection quite easy and brings the dreams before the conscious mind. In the work of the psycho-analyst the dreams of his patients are invaluable. Without the knowledge gained from them his treatment would be much more prolonged, while certain features of the buried complexes might escape his notice altogether.

Dream Stimuli

It is quite possible to evoke a dream in a sleeper's mind by applying some external stimulus to his senses. The stimulus is accepted by the dreamer, but the sleeping mind fails to interpret it aright. For instance, when the alarm clock goes off in the morning, a man may dream that he is on the morning tramcar going down to his work, and that he hears the conductor signalling the driver by pressing the bell. I have experimented with a sleeper by holding a bottle of perfume to his nose; he thereupon dreamed of being with his fiancée, who happened to use the same kind of perfume. External conditions therefore influence dreams; such conditions as the temperature of the bed, the smoothness of the clothes, the comfort or discomfort of position, any sounds in the room, all play their part in determining what a sleeper shall dream. But internal conditions are equally important and decisive. They fall into two main classes: (a)

physiological conditions; and (b) psychological conditions.

(a) The physiological conditions can be illustrated by the nocturnal results of a heavy supper. If the digestive organs fail to deal with a meal taken before retiring to bed, the sleeper's heart may begin to palpitate; this condition may then cause the dreamer to see himself falling over a high precipice, or to feel terrified by some accident or dreadful happening.

(b) The psychological conditions are due to buried wishes striving for conscious expression.

But it must be understood that both the external and the physiological stimuli arouse associated memories in the unconscious mind, and make way for the release of corresponding repressed and unfulfilled wishes. Such wishes can find expression now because the conscious mind which kept them at bay during waking hours is asleep and is not on the alert.

Types of Dreams

All dreams belong to one or the other of two types. They may be either simple or involved. The former is more common among children, though not necessarily absent from adult dreams. Let me give you two examples of this type of dream. A little girl wants a fairy cycle because her friend has one. When in town with her father she asks him to buy her one. The father replies, "Not now, dear. Perhaps some other time." Next morning the child says, "Oh, Mummie! Last night I dreamt I was riding a lovely fairy cycle in the park, and it was all my own!" Here we see how the dream fulfilled the little girl's wish to possess a fairy cycle. The second dream is that of a young man who had been working hard to pass his degree examinations. One morning he tells

his brother at the breakfast table that during the night he dreamed he was being capped at a graduation ceremony. The dream revealed the strength of his desire to obtain a degree.

The involved type of dream is not so easy to interpret, and a knowledge of its technique must first be understood, before one can appreciate the extent to which the dream reveals the hidden self in the unconscious mind. Here three important features of dream formation must be considered. They are (a) Symbolism; (b) Displacement; (c) Condensation. These three features are the disguise which the repressed thoughts use in order to find their way into the conscious mind.¹ Apart from the disguise, they would waken the sleeper because of their unpleasantness to him; the dream would then fail in its purpose, which is to preserve sleep. Therefore the intrusion into the conscious mind of these unpleasant and undesired thoughts and memories in their true and unvarnished colours must at all costs be avoided. It almost seems that there is a kind of censor standing outside the door of the conscious mind while the sleeper sleeps, and all thoughts wishing to enter consciousness must first gain his sanction before the door is opened to them. So, you see, their disguise must be approved by the censor, who decides whether it is good enough to deceive the conscious mind. In order that you may understand how deceptive the disguise worn in the dream drama is, I am going to give you examples taken from my own clinic work.

Symbolism

Let me begin with dreams which illustrate the feature

¹ The term "conscious mind" is here used to indicate the upper level of the mind, because strictly it means that part of the mind we use when attending to things (see ch. v.).

of symbolism. A symbol is generally understood to mean a concrete representation of an abstract idea. For instance, the crucifix is a symbol of our Lord's sacrifice upon the Cross at Calvary. The wedding-ring is a symbol of the marriage vow made at the altar. But in dreams a symbol is a concrete representation of some fact, thing, or idea which in itself is distasteful to the dreamer. Now for our dreams. Dream number one is that of a man who dreamed that he was standing in a large cemetery. Some years before he had this dream he had broken off his engagement to a young woman. The breaking of the engagement caused him considerable unhappiness, but he excused his action to himself by saying that in this town there were many broken engagements. The cemetery in his dream symbolised dead love experienced by many beside himself. In the second example, a man undergoing psychological treatment dreamed that he and a friend were walking through a large garage looking for a car. The garage symbolised the dreamer's own unconscious mind; the car the psychological cause of his trouble, for which he and his friend—the analyst—were searching.

It must not be supposed that the symbols of dreams can be interpreted and their meaning made clear by reference to a list. The same dream symbol may stand for two totally different things, in the dreams of two different people. According to Jung, the choice of symbols in dreams is largely determined by what he terms the racial unconscious, or racial memory. Therefore, in order to discover the true meaning of the symbols appearing in a dream, it is first of all necessary to find out, by analysis, what significance the dreamer himself attaches to the symbol. This, of course, makes dream interpretation complicated, since the analyst must discover the particular symbolic disguise which the repressed thoughts of the dreamer have adopted. But there are guiding posts which

help him to reach his conclusion, for certain symbols are common to all the members of the same race. Nevertheless, every dream must be analysed with reference to the mind of the dreamer himself, though a knowledge of his race may prove helpful in finding the true and full interpretation.

Displacement

We come now to the second disguise adopted by repressed thoughts in their striving for expression. It is called displacement, because in the dream the actual person or thing associated with the painful memory is displaced by some other person or thing. But there is always some bond of resemblance between the thing displaced and the thing which has displaced it. Let us examine the following dream. A man dreamed of seeing his girl cousin and her mother, who was lame, coming towards him one day as he was walking down a certain road. He felt highly delighted, but did not in the least know why. Now, what are the features of displacement in this dream? To find them, of course, some knowledge of the dreamer's history is necessary. Briefly, it was as follows: he was in love with a certain young lady who was not particularly in love with him. He had often wished that he could meet the girl's mother, who was lame, for he thought that through her he might win the affections of her daughter. In the dream this wish was fulfilled but, to prevent the sleeper from being awakened through excitement, the desired damsel was displaced by his cousin, whose mother had in actual life no trace of lameness.

Sometimes the people whom we see in our dreams represent ourselves or some phase of our character. When this happens we have a chance of seeing the self which we most dislike and frequently refuse to

recognise as part of our personal make-up. Perhaps the following dream will elucidate this feature. A man dreamed that he went to a dance with his fiancée and there met his friend Bob Towler, whose presence made him uncomfortable. He wondered whether Bob would approve of his girl. Bob told him that he thought he had got his £500 worth. The dreamer was indignant and struck his friend in the face for being such a cad as to value the girl in terms of money. An analysis of the dream revealed that the things he disliked in his friend were just those qualities he despised within himself. He himself had wondered whether he had chosen the right girl, and whether he was wise in spending all his savings (£500) to buy a house for her. Such thoughts were hateful to him, and he refused to believe that *he* was such a cad as to assess her value in terms of money.

It is no uncommon thing for a man or woman to have a "death wish" towards somebody else. Do not let this thought disturb you; it is not so dreadful as it seems. In children the death wish comes into play when the presence of some other child or some grown-up causes them pain. Most of us have heard an exasperated child say, "I wish you were dead." Death for the child simply means being out of the way. Perhaps we have even heard an adult say the same thing about some one who has grieved or annoyed him. Such a thought is horrible to the thinker himself, whether it finds expression in words or not, and he proceeds immediately to forget it; but when the thought finds a way into the dream life it is generally associated with some person other than the one against whom the death wish was first directed. One day a woman brought me a dream to analyse. In it she had been watching the funeral of an aunt whom she had not seen since she was a child. This girl was the victim of an inferiority complex, and she felt that every effort of hers was being thwarted by some person

or some circumstance. Her only recollection of her aunt was that she resembled her mother. This gave me the clue to the meaning of her dream, and further analysis revealed that the mother always stood between the daughter and the fulfilment of her desires. She was the real cause of the patient's feeling of frustration, and if one were to put into words what the daughter really felt regarding her mother, they would be something like this: "I wish mother were dead, then I should be free to do as I desire." This wish, of course, was too horrible to be entertained, so the patient refused to recognise it, and consequently it was repressed. But, though repressed, the wish remained active, and during sleep it strove for entry into the patient's mind, succeeding partly in this object by means of displacing the mother by the aunt. Had it not been for this displacement, the dreamer would have been compelled to recognise a forgotten desire, and the emotional strain would have awakened her. Sometimes the fear of some one dying will show itself in a dream, and in this case obviously the dreamer does not desire the death of the person symbolised. For why, if otherwise, should the emotions of fear and dread be present? I mention this because we must avoid readily forming the opinion that a dream about death always means that the dreamer has entertained a death wish towards some other person.

Condensation

In considering condensation, the third method of disguise adopted in dreams, we have reached a point where the technique of dream interpretation becomes very involved. When a psychologist says that the feature of condensation is present in a dream, he means that more than one repressed thought has attached itself to the same object or symbol. A boy

dreams that he entered a strange room—unknown yet familiar. Analysis shows that the room in the dream was associated with three actual rooms familiar to the boy. The disguise of condensation is impenetrable, and it is quite impossible for the sleeper to recognise the original painful memories. But if on awaking he remembers his dream and produces it for analysis, it will be discovered that the fusion of the different repressed thoughts has been possible because they have some common association which enables them to be fused into one dream object. For example, a woman dreamed about a soldier resembling those in pictures of the French Revolution. The dream was evoked by reading Dickens' "Tale of Two Cities", and the soldier represented no less than three people who had influenced the dreamer's life unconsciously. In the first place, he was associated with a policeman who stood for law and order, which she as a child did not like. Secondly, he was the exact height of her grandfather, who had been a very strict disciplinarian, and for this reason had been disliked by the dreamer in her childhood. Lastly, the face of the soldier was identical with that of the dreamer's grand-aunt, who exercised considerable control over her, mainly through fear. The aunt's word was law and had to be obeyed. This dream clearly demonstrates how similar repressed thoughts gravitate towards one another in the unconscious mind and may express themselves in one dream through the disguise of condensation.

Structure of the Dream

Above, then, are the three features of dream formation through which unconscious complexes gain release by disguising themselves and evading the censor. But there are still further difficulties to overcome

before the real kernel of a dream can be reached; and three further features need consideration. If a dream is told immediately on waking, it is likely to be a fairly exact description of the actual dream experience. Unfortunately, dreams are difficult to hold in memory. We may remember in the morning, for instance, that we had a very pleasant or distressing dream during the night, but often we cannot quite remember what it was about. So if a few hours elapse before a dream is told or recorded, there is invariably a lot of embroidery given which had no part in the actual dream. This embroidery is called the Secondary Elaboration, and it is necessary for the analyst to sort out the essential from the inessential parts of any dream presented to him. The essential part is called the Manifest Dream Content, and it hides somewhere in its disguise the Latent Dream Thought, which is the important thing to discover. With these new facts in mind let us examine a dream in which a boy was playing cricket with an arm-chair for wickets. The two essential facts in this dream are (a) the arm-chair; and (b) the game of cricket. Together they form the manifest dream content. In an associated way these two dream facts were related to the buried thought which was seeking expression—that is, to the dreamer's repressed criticism about his step-father. This was the latent dream thought which found a symbolic and disguised satisfaction in the dream. All the other dream details related by the patient, the description of the field and the sunny day, etc., must be regarded as secondary elaboration which has no value in the interpretation of the dream.

Dream Interpretation

It is possible to interpret dreams in two ways, to which may be given the names horizontal and vertical

interpretations. The horizontal interpretation is associated with the subconscious mind, and the vertical with the unconscious mind. The former is concerned with recent memories, the latter with remote and forgotten ones. A glance at an actual dream will perhaps illustrate this more clearly than any verbal description. "I was playing table-tennis with M. H. He so placed the ball that I was prevented from getting to it because of an obstruction from some chairs at the side of the table. I protested that this was not sporting, but he said it was all in the game, and we had agreed to take all advantage." Here is the horizontal translation. M. H. was, along with the dreamer, J. S., a member of a group of lawn-tennis enthusiasts. He and J. S. played not long before this dream in a tournament, opposing each other as singles. During the game J. S. caught his foot in a hole on the court, and slightly twisted it. When M. H. saw this, he placed the ball where J. S. had difficulty in reaching it. J. S. thought this was not sporting, but remembered that they had agreed to take all advantage in the game.

The vertical translation goes deeper into J. S.'s history, and reveals the different disguised features of the dream. When in his teens J. S. fell in love with a girl older than himself, and he set out to win her affection and attention. But a young man older than he, and about the girl's age, rivalled him and did much to gain her by exploiting J. S.'s comparative minority. He felt that he was taking an unfair advantage, but recognised that all is fair in love. Now the rival was displaced in the dream by M. H., whom J. S. associated with the former because of their stocky build and aggressiveness. The adventure of winning the girl is symbolised by the game of table-tennis, which is, of course, associated with lawn-tennis. But further, M. H. is also representing part of J. S., that part which likes to take advantage of any

handicap which a rival has. This feature of himself he deplored and refused to recognise; but, dismissed from the conscious level, it now asserts itself through the dream disguise and is projected on to M. H.

The following dream may also be used to demonstrate the double way in which the interpretation can be made. The recent events are bound up with the horizontal interpretation, and the remoter with the vertical. I give you the dreamer's own interpretation:

“The Dream

“A. The opening scene was in my wife's mother's home, where we lived for some time at the beginning of my illness. Besides my wife and myself, there were present my brother-in-law and his sister, and I think their mother was also there. We were discussing a social evening to be held that day in the Sunday School. Besides local talent, there was to be present a famous broadcasting dance band.

“Frank (my brother-in-law) was emphatic and somewhat scornful in his refusal to attend the concert. He expected me to support him in his attitude, but I had already decided to go.

“B. The next scene was at the concert. The surroundings, however, were quite unfamiliar—certainly not the Sunday School. The party, for some reason, was taking place in two rooms, both parts proceeding simultaneously.

“I was in the room in which a conjuror was displaying his art, in what I think now must have been clumsy fashion, although that wasn't exactly the impression I received in the dream. Then, I should say, my thoughts were just uncritical, although I noticed, without thinking about them, certain obvious peculiarities in the mode of performance.

“Some one remarked that the expected band had

not, after all, arrived, but a substitute was loudly proclaiming its existence from the adjoining room.

“ In our room, children were competing in some form of race. Immediately after this race began, a lady came in from the next room and claimed attention for some conjuring tricks which she herself was going to perform. She commenced, but almost at once some one pointed out that the first conjuror was still in progress, and suggested that a sound rule for both performers and audience would be ‘ one at a time ’.

“ Papers which I saw (where and why, I do not know), indicated that the newcomer had already been performing at the ‘ social ’—no doubt in the next room.

“ C. I left the first room and proceeded to the other. But now the party and all its appurtenances disappeared. I passed through stately doors into a large chamber suggestive of a Council Room. At the farthest end of this room was a table, at which were seated in business-like fashion my wife and a friend of hers.

“ The dream, I know, did not end abruptly at that point, but of what subsequently transpired, I have no recollection at all.

“ Interpretation

“ A. I remember many years ago picking up a book and for some reason deciding to read it with the aid of a dictionary, so that I thoroughly understood each word used in the story. The book was full of nautical terms, and I soon gave up the effort and continued no further with it. And now, years afterwards, my mind has seized upon that very method of displaying to the world my ‘ abilities ’, and so attracting attention to myself. It is as though my mind also seeks, by its choice, to compensate for the failure of years ago and to remove the unconscious memory of that failure to master the book.

“ Frank in the dream represents my conscious mind, to which the word scrupulosity presents no appeal now. But ‘I’ (my ego part) have already decided to proceed—for at the social is to be a famous broadcasting band—symbolic of my aim—distinction in the eyes of others.

“ B. The two rooms in the dream represent again my conscious and unconscious minds respectively. In the first room a conjurer was displaying his art, somewhat clumsily. He symbolises my underlying desire to attract attention by means of a successful career.

“ Dealing with my scholastic endeavours, one thing has been most noticeable to me recently, and that is the small amount of knowledge gleaned for exam. purposes, which my mind now retains. There lies the peculiarity in the mode of performance referred to in the dream. The conjuror deceives by his tricks. My mind likewise sought to deceive every one by its search for knowledge and ability to pass examinations. It even deceived me for a long time, until psychological analysis revealed how shallow were the motives behind that search.

“ The desire to attain a position of distinction was promoted solely by the urge to prove myself of worth and to attract attention thereby. The most recent step in the journey upwards was the final exam., preparation for which immediately preceded my breakdown. The passing of that exam. was never attained. The famous broadcasting band had not, after all, arrived, but a substitute was loudly proclaiming its existence from the adjoining room. This substitute represents my illness, which, when studying ceased, provided some measure of sympathetic attention in place of the distinction which success in the exam. would have brought.

“ About this time, too, the second conjuror—a lady—entered from the next room. The papers I saw at

this point in the dream contained figures. This lady, coming from the room of the unconscious mind, is the symbol of my scrupulosity. To replace the examination success, the unconscious mind produces a new means of attracting attention to myself. This takes the form of meticulous accuracy and care for detail, which features so strongly in everything I do. That it arose first in accounting matters explains the figures on the papers.

“In the dream, some one points out that one at a time is a sound rule to follow. With the illness now in the background (a product of the unconscious mind and therefore remaining throughout the dream in the next room), but still loudly proclaiming its existence, the scrupulosity over words and other details attains first place in the striving for attention. The desire to pass the examination completely recedes.

“C. I leave the first room (the conscious mind), and proceed to the second (the unconscious mind). Here, clearly, is the symbol of psychological analysis. The large stately chamber suggests the deep, aloof mystery of the unconscious mind. And at the *farthest end*—the most difficult part to reach—is the centre of present activity. My wife and her friend ‘were seated in business-like position’ at a table. The mind has, in its deception and planning, been indeed most business-like. It has also sought hard to hide its mystery, just as this dream hides from me, by its vague impression on my memory, that which subsequently transpired in this final scene.

“More than one of my dreams have possessed this feature of vagueness, resulting in the last scene being but dimly remembered in part. This fits in with the analysis as it is at present—Incomplete, though steadily progressing.”

Here let me say two things which I believe are important. The first is this. No individual can completely analyse his own dreams. If he has a sound psycho-

logical knowledge, he may catch glimpses of himself in his dreams, and is able to judge certain features of resemblance between the displacement object which he actually sees in his dream and the people and things he knows in ordinary life. But all this knowledge can at most touch only the surface of the dream and give the horizontal interpretation. The vertical interpretation, which is found through an analysis of the dream in its relation to the unconscious mind, is only possible for the analyst to discover.

The second thought I wish to leave with you is that it is not possible to interpret correctly the dream of any person without intimate knowledge of that person's history, and this can be acquired only through personal contact. Therefore it is quite impossible to be dogmatic about any interpretation of Biblical dreams. The interpreters themselves, no doubt, feel that their work is sound, since they have taken into consideration the life of the dreamer. For instance, take the dream of Joseph, in which he saw the sun, moon, and stars, representing his parents and brothers, bowing before his star. This dream suggests, judging from Joseph's later attainments, that he was ambitious, but refused to recognise the fact, and subsequently repressed and forgot it. Therefore the unfulfilled wish for power reveals itself in his dream. Such an interpretation may serve as an illustration of the way in which the unconscious mind may make itself known, but that is quite a different thing from saying that it is the correct interpretation of the dream. To interpret Joseph's dream aright, we should require Joseph's presence with the analyst while the investigations into his mental history were being made.

Here is one word of warning. It is a great mistake to ask an analyst in public to interpret your dreams. Once when I was lecturing at a certain place in Yorkshire, a woman whom I knew asked me to analyse a dream which had been troubling her considerably.

After hearing it, it was perfectly clear to my mind that had I done so that person would have been terribly shocked—so shocked, in fact, that she might have thought that I was out to amuse people at her expense. A friend of mine once told me that when taking dinner with some friends of his the subject of dream interpretation was discussed. One man present tended to pour ridicule on the whole topic, and cynically said to my friend, “I dream often that I am caning boys. Now, interpret that.” To a trained mind watching the behaviour of the man, it was clear that the dream revealed him to be a sadist. But would he have liked to be told this before others? Emphatically no! So I would suggest to my readers that it is very unwise, and often very embarrassing, to ask a psychologist to interpret a dream either in the lecture hall or at a private gathering of friends. If you want to have your dreams analysed, the only place to tell them is inside the consulting-room of the analyst.

One other personal word is needed. It may be that some readers are now thinking about the nature of many of the dreams which they have had from time to time. You may now recognise that certain features of your dreams reveal a self which you never previously thought existed in you. This fact can be better accepted if it is remembered that the unconscious which reveals itself through dreams is a-moral; that is, it pays no regard to what is right or wrong. The instinctive urges which are forbidden on the conscious level of our mental life are always striving for a way of escape. In themselves they are neither moral nor immoral; it is the goal to which they are directed which decides the ethical content of our behaviour. It so often happens, however, that the urge is confused with its goal, and is therefore repressed. For example, to go back to the dream of table-tennis and its interpretation (p. 136): J. S. feels the urge to take advantage of some one's handicap when competing with him.

He desires to direct the assertive tendency towards an immoral end, but his moral training conflicts with this desire, which is then repressed, and which later asserts itself through the dream medium. The correct thing to do, then, is to recognise the repressed desire and detach it from its corresponding tendency. To dream that one is behaving in an immoral way does not mean that one consciously desires such behaviour, only that one took fright at its suggestion when tempted. If the temptation is courageously faced and defeated by reason, it is not likely to trouble the dreamer.

To summarise, then. The dream is a necessary function of the mind which permits repressed thoughts and unfulfilled wishes to find some measure of relief. There are two types of dreams, the simple and the involved. They make use of a technique in which the principal features are Symbolism, Displacement, and Condensation. To interpret their meaning and discover the relationship of the dream facts to the unconscious mind we must distinguish the Secondary Elaboration from the Manifest Dream Content, which is that part of the dream related to forgotten thoughts and wishes. In the interpretation of dreams we discover both a horizontal and a vertical meaning, and before precise and correct analysis is possible we require the dreamer's presence, and intimate knowledge of his mental life. Lastly, the value of the dream is psychological and not moral; it enacts thoughts which we have actually had about ourselves and others.

CHAPTER X

THE FINAL AIM OF PSYCHOLOGY

THIS chapter can now be read in the light of all that has gone before. It can now be seen that before the day of Experimental psychology, which received its impetus from the great German psychologist Wundt, philosophers, both ancient beginning with Aristotle and modern starting with Descartes, were seeking to understand the behaviour of man, especially the way in which he thinks and feels. The Physiologists thought they had solved the problem by studying sensations, sensory and motor responses. The Introspectionists were of the opinion that we could understand the mental processes only by the aid of a special technique which made possible a looking-in upon one's own mind, and judging for one's self what was happening there. The Behaviourists hotly disputed the belief that introspection could be regarded as either scientific or satisfactory as a method for understanding human behaviour; so they contented themselves with the study of conditioned reflexes as inaugurated by Pavlov and others. But the Hormic psychologists, notably McDougall, equally disputed the claims of the Behaviourists, who overlooked the fact of innate drives or instincts; and it is upon their theory that modern psychology is principally based.

Modern psychology can be said to be concerned firstly with how we receive our sense impressions—that is, our knowledge of the external world—in much the same way as the Sensationists were. It seeks to understand how things came to be associated within the mind, just as the Associationist sought. Briefly, modern psychology gives due emphasis to the material that enters the mind from without, and what happens when the mind is receiving it. But secondly it pays regard to the background of our mental life—to the instincts, their nature, peculiarities, and their emotions which

are influenced by the glands and play an important part in the formation of temperament. The way in which we think, feel, and act is not only a product of the environment, but also of our heredity.

But to say that the aim of modern psychology is to explain the mental processes of human or animal behaviour is only part of the truth. It has a definite practical aim, which is the application, when and where possible, of all that is learnt in the study and discovered in the laboratory. There is little doubt that in the New World psychology will have a large part to play. Human hopes and plans depend ultimately on the individual's ability to respond to his environment, and the less fettered he is by his own inhibited forces the more likely is he to create a world free from war and cruel injustices. Medical science aims at greater physical life for men and women, and thereby for the society and the nation. Its study is not confined to the human body, but also to its environment, which plays an important part in the development of the body. Similarly, psychology is concerned with the mental health of the individual, who subscribes to the life of his society and nation. Apart from the individual there is no such thing as a group mind. What we mean by the group mind is merely the sum total of individual attitudes within the group itself. It is, of course, true that the members of the group are influenced by their leaders and others in what they think and how they feel; but not altogether, otherwise it would be impossible to explain why opposition leaders spring up among them, and how from time to time prophets arise in their very midst.

In a true democracy there is less room for a group mind than in a totalitarian State, and since psychology aims at the full development of the individual as a thinker, it is indispensable to a democratic society. If there is any weakness in our present democracy, it lies in the impotence of a high percentage of men and

women to think individually and to accept greater responsibility for our national and international policies. Laziness is not a sufficient reason for this impotence. A more adequate reason is inability and indifference, both of which can be psychologically explained; but the explanation brings with it suggestions for their cure, which if accepted and applied will do much to liberate men and women for making democracy a more glorious thing than it now is.

But quite apart from the group or state, psychology aims at enriching the individual's life, and pointing out to him ways and means of using to the full his mental equipment. Many a man is unhappy because he does not know how to adjust himself to his environment, how to deal with his loneliness, his monotony, his problems, and his difficulties, how to recognise his personality defects, his neurotic trends, his compulsions, and his inhibitions. Whilst psychology helps the individual to understand himself, it endeavours to influence his environment, so that he may stand a better chance of expressing himself in the home, at school, at work, in his societies, and in his religion. The ultimate aim of psychology, then, is both individual and environmental, both personal and social. It is no longer content merely to know how man thinks and behaves, but how he may think better and behave more rationally.

The application of psychology has now come to be known as Mental Hygiene, and its aim is to assist men, women, and children in the art of correct adjustment, and to restore the art where it has been lost—or perhaps never learnt. Let us begin by briefly glancing at what is done by psychologists for children. A comparatively recent term used in this sphere is "Preventive Psychology", and the idea behind it is to teach parents and teachers a thorough knowledge of the child's mind, beginning with infancy, then dealing with the pre-school years, the middle years of child-

hood, the age of puberty, and ending with adolescence. The infant, the child, and the adolescent pass through different phases of emotional development, and unless these are recognised and correctly handled when they appear, much harm can be done, and consequent personality defects will appear in adulthood. For example, one such phase is known as the "temper-tantrum" phase, when the child has uncontrollable bouts of anger, screaming for no apparent reason and flinging about his limbs in unpacifiable rage. This form of behaviour greatly distresses parents, who, unless they understand it, are likely to make the fatal mistake of either thrashing the child with the intention of mastering his rage, or locking him alone in a room until it subsides. One of the unfortunate results of this wrong treatment is bad temper in adulthood. The ungovernable rage of the adult is nothing more nor less than a regression to the temper-tantrum of childhood. From this example alone it can be seen how advisable it is that parents and teachers should know a good deal about Preventive psychology before they can achieve satisfactory success in the art of training and educating young children. The formative years of a child's life (some put this before five, others as late as seven) are the foundation-stone of his personality, and they need to be treated with the same care as a gardener shows in his treatment of his young plants.

To assist parents and others there have been set up in some towns and cities Child Psychology Clinics, which are attended by a medical psychologist (or psychiatrist), an educational psychologist, and a social psychologist. Difficult or problem children are referred to the Clinic by either the doctor or the head teacher. The medical psychologist first examines the children and notes anything of a defective nature, both physical and mental. Under the care of the educational psychologist they are helped in the art of adjustment, whilst the social psychologist investigates

the nature of their respective environments. Upon the three combined reports the parents are advised what to do in helping to solve the child's problems and restore him to normal living.

It sometimes happens that the child's failure to adjust himself to home or school or social life is revealed in some form of anti-social behaviour, and he is then brought under the classification known as "The Young Delinquent". Much sound work has been done in this particular field of psychology by experts like Dr. Cyril Burt, and one is happy to note that many magistrates presiding over children's courts are recognising and using the invaluable help which the psychology of delinquency is now offering us. To those who study this subject it is clear that crime, in both old and young, is due to some personality defect, just as many another psychological illness or neurosis is. Nothing is more obvious than the need for skilled psychologists who can arrest the delinquency of the anti-social child and save him from a life of perpetual crime, in which he ultimately becomes a recidivist. Such a fulfilment will not only rescue the maladjusted child, but also save society from many of its adult criminal difficulties.

When the child leaves school he goes to work. But in fairness to him it should be asked, "What work is he best fitted for?" The answer can best be supplied by the vocational or industrial psychologist, whose task is to test the potential employee and make recommendations to those concerned on the kind of work for which he is best fitted. At present much valuable work is being done in the Army, Navy, and Air Force by suitably trained psychologists, who test the intelligence and estimate the personality make-up of the different members in the Forces. Their results are duly forwarded to the proper authorities, who then make their choice of the men and women best fitted for the appropriate key positions. It is hoped that

a much greater extension of this kind of mental hygiene will be made in all branches of industry. Already in some of our factories, such as those of Messrs. Rowntree of York and Messrs. Cadbury of Birmingham, industrial psychologists are engaged in mental testing and directing of the employees. It is found that by placing workers in work best suited to them there is not only a greater output, but better health is enjoyed by each individual. In a report published by V. V. Anderson ("Psychology in Industry", 1929) it is stated that in a large store 20 per cent. of the workers were misfits. The inevitable result was a loss of output and a lowering of physical and mental fitness. This only serves to prove the necessity for some immediate application of industrial psychology; and since every man spends at least one half of his waking life in one industry or another, he should be helped to better health and greater efficiency.

When young people have been at work for a time they desire marriage, and here again they can benefit from the help psychology offers. It is a mistake to think that because two people fall in love with each other they will necessarily live happily after being married. A successful marriage depends on a satisfactory physical, emotional, and mental relationship. Physical harmony is by no means guaranteed to two young lovers because before their marriage they showed considerable affection for each other. Sometimes difficulties arise, and generally from some psychological basis; these may be removable, and the foundation of a true, happy marriage can then be laid. Similarly, emotional incompatibilities can be adjusted if the marriage partners are willing to be frank, not so much with each other as with themselves. And if they apply their knowledge of psychology to their problems or, failing this, consult the expert, they will see more clearly where adjustment is needed. There is a psychology of marriage, and it will con-

siderably benefit those who hope to marry, and even those who are married, providing they are willing to study it. Mental harmony between husband and wife is one of life's priceless treasures, and it can be achieved by the desire to think objectively about each other. It does not mean that they must both be interested in the same thing; often a difference in interests makes for colour in the married life, and when there is a common interest the art of knowing when to assert and when to submit must always be employed.

But what an art this is! It is the greatest of all arts, and many a marriage has succeeded in its aim of uniting two personalities in the bond of true happiness because the partners knew how to apply it in their relationships with each other. The failure either to assert or submit at the right moment is due to some faulty development in one or both personalities, but this need not become a treacherous rock upon which their marriage may be shipwrecked. The answer to "Why this failure?" can be supplied by psychology, one of the kindest of all the sciences.

Let it be said again that psychology's final aim is not merely academic in the sense that it seeks to explain why men think, feel, and act in either a good or a bad way, but practical in that it seeks the advancement of human happiness through helping men and women to make a success of life. Marriage is part of this, and it is not only the avenue through which male and female can find their true selves, but a true test of their emotional maturity, because it is here they see each other face to face, and no longer through rose-coloured spectacles; here they learn how to dovetail their personalities in an intimate way, and the more they know themselves as individuals the greater will be the success of their life together. Who can deny, then, that the help which psychology offers is invaluable even for marriage?

The field of psychotherapy is outside the scope of

this book, but as a matter of interest and slight information it may be said that here psychology seeks to cure those mental illnesses called Psychoneuroses.¹ In the hands of specialists many mentally ill people have found restoration of health, they have learnt how to avoid worry, how to be free from compulsions, how to escape depression and moodiness, and even how to enjoy better physical health. One eminent medical man said some time ago that one in every three people is ill, not for physical reasons, but for psychological. It is evident that this highly specialised branch of the subject you have been teaching yourself is none other than complementary to medical science.

It might appear, from all that has been stated about the final aim of psychology, that there is no longer any need for religion. If this science, with its vast and increasing knowledge of the human mind, is able to give such direction to the training of young children and adolescents as will adequately fit them for adulthood, to offer suitable advice for their professional or vocational future, to help men and women in their married life, and when necessary to provide cures for their mental illness, why concern ourselves about God, when man is in this way sufficient in himself? The answer is, surely, that psychology seeks to understand the whole of man, and religion is as much a part of his nature as any other. Man's need for that something we call God has manifested itself throughout human history. His religious feelings first found their expression through crude, inarticulate, and primitive ways, but later through refined and articulate forms of worship and living. Psychology cannot explain religion away; its aim is to explain the mental processes that go on in man's mind when he experiences fellowship with his God. And any psychologist who

¹ A more correct term would be Benign Psychoses, which means those mental illnesses that are curable. Malignant Psychoses are generally incurable.

argues that religion is only an illusion based on wishful thinking and projection, is trespassing outside the legitimate field of his science, and his trespass is not only unscientific, but is also itself based on his own psychological complexes.

It is true that psychology has done much to separate the true from the false religious experiences, and has helped to rid religion of much cant and humbug; but this is very different from saying that religion is displaced by psychology. Like all the other sciences, psychology is the handmaid of religion, and we must admit a very useful one. In recent years it has made three valuable contributions:

A. It has exposed many of the false claims of so-called spiritual healing.

B. It has helped many men and women who desired and sought a religious experience but could not get it.

C. It has revealed the emotional basis of agnosticism and atheism.

A. The claims of many men and women to have been physically healed by prayer, and through such spiritual agencies as sacred shrines or water, are not necessarily true, because what has probably happened is that the medium through which the cures were effected was none other than suggestion. This can be either heterosuggestion or autosuggestion; the former is made by the doctor to his patient, the latter by the patient to himself. In spiritual healing heterosuggestion is used by the priest or pastor on behalf of those who evoke his help. Prayers are offered on behalf of the sufferers, and these doubtless heighten their suggestibility and make their minds more ready to receive the ideas of healing. Again, if the sufferer makes use of his own prayers for the purpose of being healed, he is employing the method of autosuggestion, or if he visits a popular shrine, his mind is already

prepared for his own (auto-)suggestions by the mass suggestion which has strongly recommended such a procedure to him. Let it not be thought that we are trying to under-estimate the power of prayer. What we are doing is to point out that through much psychological research it is now known that people who are cured of their diseases by spiritual agencies could have been cured by the psychologist using the method of hypnotism, persuasion, or analysis, and that the basis of the illness was not physical, but psychological, or if its primary basis was physical its protraction is psychological. The fundamental concern of psychological healing is the cure of the whole personality, and not merely the removal of any one particular symptom troubling the individual, and this can only be achieved successfully through the linking up of the individual with his God. This leads me to the second contribution of psychology to religion :

B. Certain people have in all sincerity desired a religious experience which supplies the answer to the questions—Why must I live? What is my true place in the world about me and the universe around me? What is my relationship with that creative power that lies behind everything? But conscious desiring and ardent seeking have brought them no fulfilment, and left to themselves they are prone to despair, doubt, and unbelief. Fortunately, psychology can provide the help they need. By the aid of analysis, which sometimes is necessarily deep and prolonged, the unconscious barriers to a comparatively full spiritual life can be removed. Let me briefly quote one case which will help you to understand what I mean. A young man greatly desired a religious experience, but because of an unconscious confusion between God and his father, who always treated him with indifference and gave him little or no friendship, he was unable to attain it. This psychological factor of his life as a child caused the man to feel each time he prayed that

God was simply not interested in what he was saying. On realising what had been happening in his unconscious mind, he found the experience for which he had been searching. It has been the experience of many analysed men and women to find a deeper religious sense within themselves than before the analysis began. One such person was Dr. William Brown a medical psychologist of outstanding repute. For scientific reasons he went through an analysis on his own mind, and one of the results was a richer Christian experience. So instead of trying to explain religion away in terms of an illusion, wishful thinking, and projection, psychology is able to explain why some are prevented from having the greatest of all experiences.

C. Then, finally, psychology is able to reveal the emotional basis for religious unbelief. What appear as intellectual reasons for atheism and agnosticism are fundamentally emotional, and are rationalisations for some emotional conflict. It must be recognised that on the conscious level religion is frequently rejected because of the apparent inefficacy of prayer and the impracticability of its teachings. This rejection, however, is due to wrong ideas concerning prayer, and also to an inadequate examination of all that has been done in the name of religion. For example, to set aside Christianity as useless because a number of professing people fail to live the true Christian life is like condemning the whole of politics because there happen to be a number of bad politicians. Such an attitude is surely irrational; it commits the fallacy of arguing from a few particulars to the general.

Now, there are heavy arguments put forth against religion which have every semblance of being soundly logical, and for the untrained thinker even convincing. But if man's need for religion is as fundamental as the need for food or for friendship, then the psychologist is well within his province when he asks, "Why do some people lack the desire to satisfy such a need?"

If a patient tells his doctor that he has no appetite for food, the latter proceeds to find out the cause of this departure from the normal. Similarly, when the psychologist is told by his patient that he has no need for religion, he seeks the underlying causes for this mental attitude, and they are found among the buried complexes of the patient's unconscious. A case in point will help to elucidate this fact. A young woman falls in love with her friend before she goes on to the university. There she meets some one who appeals to her much more, but how to break off the old relationship without losing face she does not know. Returning home for a vacation, the young woman is told that her friend has decided to study for the Christian ministry. Here, then, is a way of escape. She can no longer promise to be his wife, because her university training has destroyed her belief in God. To support this defence she produces argument after argument, and finally builds up an edifice of atheism which deceives even herself. When the emotional basis of the unbelief was revealed, the edifice collapsed, and she found her need of religion. Many similar cases can be quoted, but they, too, would only substantiate the claim that psychology within its legitimate sphere can disclose the lie that is centred in the heart of religious unbelief and uncover the emotional basis of agnosticism and atheism.

To sum up, then: Psychology, which began as a nebulous part of philosophy, winding its way through the realms of physiology, has finally emerged as a science on its own. Its final aim is not merely to state how man thinks, feels, and acts, but how he can do these things much better and more in accordance with the Divine purpose that lies at the back of all things; how he can adjust himself, and make some personal contribution to the whole of his environment, physical, social, economic, matrimonial, and religious.

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